

2.5 Cultural and Paleontological Resources

This section of the EIR describes the existing cultural and paleontological resources in San Diego County. Cultural resources include both archaeological and historic sites, buildings, structures, objects and human remains. Paleontological resources include the remains and/or traces of prehistoric life (exclusive of human remains, artifacts or features), including the localities where fossils were collected and the sedimentary rock formations in which they were formed. This section evaluates existing cultural and paleontological resources, analyzes the potential impacts that may occur under the proposed General Plan Update, recommends mitigation measures to reduce or avoid impacts to these resources and examines levels of significance after mitigation. This section is based on the review of the Conservation and Open Space Background Report (DPLU 2007b), Guidelines for Determining Significance, Cultural Resources (DPLU 2007i), and Guidelines for Determining Significance, Paleontological Resources (DPLU 2009d).

A summary of the cultural and paleontological resource impacts identified in Section 2.5.3 is provided below.

Cultural and Paleontological Resources Summary of Impacts

Issue Number	Issue Topic	Project Direct Impact	Project Cumulative Impact	Impact After Mitigation
1	Historical Resources	Potentially Significant	Potentially Significant	Less Than Significant
2	Archaeological Resources	Potentially Significant	Potentially Significant	Less Than Significant
3	Paleontological Resources	Potentially Significant	Potentially Significant	Less Than Significant
4	Human Remains	Potentially Significant	Potentially Significant	Less Than Significant

2.5.1 Existing Conditions

Cultural resources are found throughout the County and are reminders of the County's prehistoric and historic past. The cultural environment consists of the remains of prehistoric and historic human activities. San Diego County has more than 27,000 recorded sites (19,400 archaeological recorded sites and approximately 8,000 other cultural resources) as of the date of this report and this number continues to grow. The following discussion provides background information as well as an inventory of the essential components that make up the County's cultural environment.

Archaeological and historic resources are the remains left by ancestral people who made and used them. These resources can provide clues to prehistoric and historic human behaviors, and provide scientific, religious and other valuable educational information about the cultural past. It is the cultural past that has helped shape the present community and that will continue to create the future. Resources include traditional cultural places such as gathering areas, landmarks, significant historic buildings and ethnographic locations, as well as physical artifacts. Cultural resources are found throughout the County, are irreplaceable, and are therefore considered vital to the general welfare of all County residents.

Paleontological resources are found in sedimentary strata of the County, which primarily underlies the coastal plain, the desert and some mountain valleys. The prehistoric life forms preserved in the sediment in these areas provide insight to the environment that existed in the County during various prehistoric time periods. The defining character of paleontological resources is their geologic age. Fossils or fossil deposits are generally regarded as being older than 10,000 years, marking the end of the late Pleistocene and the beginning of the Holocene. Refer to Figure 2.5-1 for the geologic time scale. The strata underlying areas of the County record portions of the past 450 million years of Earth's history.

2.5.1.1 Cultural Resources

Cultural resources can be identified and evaluated based on standard criteria established by the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), CEQA and the San Diego County Local Register of Historical Resources. The integrity of the resource, its attributes and location are also key factors in establishing its significance. Resource significance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture that possess a high degree of integrity.

Cultural resources, as defined in this document, consist of the remains of prehistoric and historic human behaviors and include both archaeological and historical resources. Archaeological resources include artifacts and features found on both the surface or under the surface and include both prehistoric and historic time periods. Historic resources refer to the built environment 50 years or older including buildings such as homes, barns, churches, factories; or structures such as mines, flumes, roads, bridges, dams, and tunnels.

Archaeological Resources

San Diego County Cultural Background

Archaeological evidence reveals that San Diego County has a long cultural history beginning approximately 10,000 years ago. The following cultural background discusses the characteristics of each cultural period of prehistory and history. The information that follows is reproduced with the permission of the author, Dennis Gallegos (Gallegos 2008).

Pre-Contact Background

The body of current research of Native American (pre-contact) occupation in San Diego County recognizes the existence of at least two major cultural traditions, discussed here as Early Period/Archaic (prehistory) and Late Period (history), based upon general economic trends and material culture, as shown in Table 2.5-1. Within San Diego County, the Early Period/Archaic includes the period from 10,000 to 1,300 years ago, while the Late Period is from 1,300 years ago to historic Spanish contact (contact). The Post-contact/Historic Period covers the time from Spanish contact to present.

Terminology used for the past 10,000-year history of San Diego County includes a mixture of ideas of ordering archaeological sites using terms for peoples, collections of artifacts, and temporal time frames. The first ordering was by Malcolm Rogers who used the terms: Shell-Midden people, Scraper-Maker culture (scraper-makers), and Yuman. He later revised his

chronology to use the terms San Dieguito (scraper-maker), La Jolla culture (shell-midden people) and Yuman. Claude Warren characterized the San Dieguito tradition as including a wide range of scraper types made on side-struck flakes and finished by well-controlled percussion flaking, leaf-shaped knives or large points of several varieties, leafshaped, lanceolate and slightly shouldered points in small number. Chipped stone crescents, often eccentric in form, hammerstones and flaked tools are few in number. Milling stones and manos were not present. Warren's revision to Rogers' La Jolla culture, called the Encinitas Tradition, identifies the majority of flaked stone tools being percussion flaked and made from local macrocrystalline rock and a large percentage of the tool assemblage composed of chopping, scraping and cutting tools and hammerstones. Projectile points are rare and rather large, suggesting the use of darts, rather than bow and arrow. Ground stone items include large numbers of manos and milling stones usually shaped through use, and occasional items such as doughnut stones, discs and cogstone. Bone tools are rare but include awls, antler flakers, and beads. Shell items are also limited, but include beads and pendants. Basketry is represented. Loosely flexed burials are found throughout the area. Warren has more recently updated his chronology and for the San Dieguito Tradition (initial occupation) has since included milling tools and a wider range of tools and food sources, and now discusses the potential of transitional and intermediate stages of occupation to cover the past 10,000 years of Native American occupation in San Diego County. Early Man in San Diego County was discussed by George Carter in the 1950s; however little to no evidence of Pleistocene human occupation supports this hypothesis.

Early Period/Archaic

The Early Period/Archaic includes the San Dieguito, La Jolla and Pauma complexes, which are poorly defined, as are the interrelationships between contemporaneous inland, desert, and coastal assemblages. Initially believed to represent big game hunters, the San Dieguito people are better typified as a hunting and gathering society. These people had a relatively diverse and non-specialized economy wherein relatively mobile bands accessed and used a wide range of plant, animal, and lithic (stone) resources. Movement of early groups from the California desert may have been spurred by the gradual desiccation of the vast pluvial lake system that dominated inland basins and valleys during the early to middle Holocene. This hypothesis is supported by the similarity between Great Basin assemblages and those of Early Holocene Archaic sites in San Diego County. Several researchers recognized the regional similarity of artifacts and grouped these contemporaneous complexes under the nomenclature of either the Western Pluvial Lakes Tradition or the Western Lithic Co-tradition.

Early migrations into San Diego County may have come from the north. Recent work on the northern Channel Islands near Santa Barbara demonstrates island occupation dating back to the terminal Pleistocene, roughly 13,000 years ago. At this early date, a fully maritime-adapted population exploited shellfish and used seaworthy boats to ply channel waters. Fish were captured using bone gorges by 10,000 years ago. Such early dates are lacking for the adjacent Santa Barbara mainland, presumably because the rise in sea level brought about by post-Pleistocene deglaciation would have inundated sites along the late Pleistocene/early Holocene coastlines. At this time in San Diego County, the shoreline stood 2 to 6 kilometers (km) farther seaward than today's coast. Therefore, any evidence for early coastal adaptation coeval with that of the northern Channel Islands may have been destroyed within this two to six km paleo-shoreline area by sea encroachment thousands of years ago.

The origin of coastal populations in San Diego County and subsequent interaction between these populations and Great Basin/desert groups is a subject of some debate. Whether they

migrated into San Diego County from the coast or inland, the first occupants immediately exploited coastal and inland resources of plants, animals, shellfish, and fish.

The development of a generalized economic system indicates that the initial occupation, referred to here as San Dieguito, can be placed within the general Archaic pattern. Archaic cultures occurred within North America at slightly different times in different areas, but are generally correlated with local economic specialization growing out of the earlier Paleo-Indian Tradition. Archaic cultures are often represented by more diverse artifact assemblages and more complex regional variation than Paleo-Indian traditions. This is generally thought to have resulted from the gradual shift away from a herd-based hunting focus to a more diverse and area-specific economy.

The earliest known sites are found near coastal lagoons and river valleys of San Diego County. These sites are the Harris Site (CA-SDI-149), Agua Hedionda sites (CA-SDI-210/UCLJ-M-15 and CA-SDI-10695), Rancho Park North (CA-SDI-4392/SDM-W-49), and Remington Hills (CA-SDI-11069) dating from 9,500 to 8,000 years ago. The northern San Diego County coastal lagoons supported large populations, circa 6,000 years ago, as shown by the numerous radiocarbon-dated sites adjacent to these lagoons. After 3,000 to roughly 1,500 years ago, there are fewer archaeological sites in northern San Diego County. This reduction in number of archaeological sites can be attributed to the slowing of the rise in sea level and concomitant siltation of coastal lagoons causing the depletion of shellfish and other lagoon resources. Archaeological sites dated to circa 2,000 years ago are found in the Camp Pendleton area, wherein shellfish (*Donax gouldii*) were collected from open-shore sandy beach habitat and bay species were still abundant in San Diego Bay, and present but not as dominant in other lagoons. Batiquitos Lagoon and perhaps other lagoons reopened circa 1,500 years ago, therein producing shellfish, but neither with the quantity, size or variety of shellfish as documented for the early to middle Holocene.

The La Jolla and Pauma Complexes, which are referred to as following the San Dieguito Complex, may simply represent seasonal or geographic variations of the somewhat older and more general San Dieguito Complex. Inland Early/Archaic Period occupation sites have been reported in coastal settings, transverse valleys, sheltered canyons, benches and knolls. In northern San Diego County, non-coastal sites were termed "Pauma Complex" by True in 1958 and 1980, and were defined as containing a predominance of grinding implements (manos and metates), having a general lack of shellfish remains, a greater tool variety, and expressing an emphasis on both gathering and hunting.

Early Period/Archaic sites from 10,000 to 1,300 years ago within San Diego County include a range of sites that include coastal and inland valley habitation sites, inland hunting and milling camps, and quarry sites, usually in association with fine-grain metavolcanic material. Material culture assemblages during this long period are remarkably similar in many respects. These deposits may well represent a process of relative terrestrial economic stability and presumably slow cultural change. Though various cultural traits developed or disappeared during the long span of 10,000 to 1,300 years ago, there is a clear pattern of cultural continuity during this period.

Late Period

During the Late Period (circa 1,300 to historic contact) a material culture pattern similar to that of historic Native Americans first became apparent in the archaeological record. The economic

pattern during this period appears to be one of more intensive and efficient exploitation of local resources. The prosperity of these highly refined economic patterns is well evidenced by the numerous Kumeyaay/Diegueño and Luiseño habitation sites scattered throughout San Diego County. This increase in Late Period site density probably reflects both better preservation of the more recent archaeological record and a gradual population increase within the region. Artifacts and cultural patterns reflecting this Late Period pattern include small projectile points, pottery, the establishment of permanent or semi-permanent seasonal village sites, a proliferation of acorn milling sites in the uplands, the presence of obsidian from the Imperial Valley source Obsidian Butte, and interment by cremation.

Luiseño occupation in northern San Diego County during the late Holocene has been viewed as an occupation that migrated from the desert to the coast, an incursion called “the Shoshonean Wedge.” Late Period culture patterns were shared with groups along the northern and eastern periphery of San Diego County, incorporating many elements of their neighbors’ culture into their own cultures. This transference and melding of cultural traits between neighboring groups makes positive association of archaeological deposits with particular ethnographically known cultures difficult. This is particularly true of the groups within San Diego County. Although significant differences exist between Luiseño and Kumeyaay/Diegueño cultures (including linguistic stock), the long interaction of these groups during the Late Period resulted in the exchange of many social patterns. Archaeologists must rely heavily on ethnographic accounts of group boundaries as recorded during the historic period, although it is not known how long these boundaries had been in place or the validity of these boundaries as presently reported.

In 1925, Kroeber placed the Kumeyaay and Luiseño boundary between Agua Hedionda and Batiqitos Lagoon. According to Luomala in 1978, the territory of the Ipai extended along the coast from the San Luis Rey River in the north to San Diego Bay in the south with San Felipe Creek marking the eastern boundary. The territory of the Tipai, the southern group, extended south from San Diego Bay to include parts of Mexico and the southern mountains. In 1993, Florence Shipek identified the northern and southern Kumeyaay/Diegueño tribal boundary as:

“In 1769, the Kumeyaay national territory started at the coast approximately 100 miles south of the Mexican border (below Santo Tomas), thence north to the coast at the drainage divide south of the San Luis Rey River including its tributaries. Using the U.S. Geological Survey (USGS) topographic maps, the boundary with the Luiseño then follows that divide inland. The boundary continues on the divide separating Valley Center from Escondido and then up along Bear Ridge to the 2240 contour line and then north across the divide between Valley Center and Woods Valley up to the 1880-foot peak, then curving around east along the divide above Woods Valley.”

Archaeological Sites

Culturally significant resources have been found throughout the unincorporated County. The location of many of these sites is known but kept confidential in order to protect these resources from desecration or theft. Cultural resources are often identified during the environmental review process (including CEQA review) for projects within the County. If these resources are determined to be significant, steps for their protection will be put into place.

Significant Prehistoric Site

The C.W. Harris Site Archaeological District is one of the most significant archaeological sites in the western U.S. and has been placed on the NRHP. The Harris site is located in the San Dieguito River Valley and documents over 9,000 years of occupation in the San Diego region. Almost 70 years of study at this site has provided important information about the prehistory of the western U.S., and pushed back the time of occupation in California by thousands of years. Artifacts from the Harris Site date back to the Late Prehistoric, La Jolla, and San Dieguito periods of San Diego County. The Harris Site differs from other archaeological sites in the County because the stratigraphy of the site was preserved. Artifacts are usually found in horizontal layers called strata (several parallel layers arranged one on top of another) which in the past have been disturbed by burrowing animals, floods, and agricultural activity. The preservation of strata at the Harris Site allowed archaeologists to reach a significant conclusion about the sequence of cultural history in the region. Before excavation began at the Harris Site many archaeologists believed that the La Jolla period was older than the San Dieguito period.

Historic Resources

Historic Resources Background

The history of San Diego County is commonly presented in terms of Spanish, Mexican, and American political domination. A discussion of historic land use and occupation under periods of political rule by people of European and Mexican origin is justified on the basis of characteristics associated with each period, when economic, political, and social activities were influenced by the prevailing laws and customs. Certain themes are common to all periods, such as the development of transportation, settlement, and agriculture. Robinson (1969) provides a comprehensive account of public and privately owned land in California, with a discussion of laws, activities and events related to the development of the State.

Spanish Period (1769-1821)

The Spanish Period represents exploration, the establishment of the San Diego Presidio and missions at San Diego (1769) and San Luis Rey (1798), and asistencias (chapels) to the San Diego Mission at Santa Ysabel (1818) and to the San Luis Rey Mission at Pala (1816). Horses, cattle, agricultural foods, weed seeds, and a new architectural style and method of building construction were also introduced. Spanish influence continued after 1821 when California became a part of Mexico. For a period of time under Mexican rule, the missions continued to operate as in the past, and laws governing the distribution of land were also retained.

Mexican Period (1821-1848)

The Mexican Period includes the initial retention of Spanish laws and practices until shortly before secularization of the missions in 1834, a decade after the end of Spanish rule. Although several grants of land were made prior to 1834, vast tracts of land were dispersed through land grants offered after secularization. Cattle ranching prevailed over agricultural activities, and the development of the hide and tallow trade increased during the early part of this period. The Pueblo of San Diego was established and transportation routes were expanded. The Mexican Period ended in 1848 as a result of the Mexican-American War.

American Period (1848 to Present)

The American Period began when Mexico ceded California to the U.S. under the Treaty of Guadalupe Hidalgo. Terms of the treaty brought about the creation of the Lands Commission, in response to the Homestead Act of 1851 that was adopted as a means of validating and settling land ownership claims throughout the State. Few Mexican ranchos remained intact because of legal costs and the difficulty of producing sufficient evidence to prove title claims. Much of the land that once constituted rancho holdings became available for settlement by immigrants to California. The influx of people to California and the San Diego region resulted from several factors including the discovery of gold in the State, the conclusion of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The growth and decline of towns occurred in response to an increased population and the economic boom and bust cycle in the late 1800s.

Native American Perspective

In addition to the point of view discussed above, the County acknowledges that other perspectives exist to explain the presence of Native Americans in the region. The Native American perspective is that they have been here from the beginning as described by their creation stories. Similarly, they do not necessarily agree with the distinction that is made between different archaeological cultures or periods, such as “La Jolla” and “San Dieguito.” They instead believe that there is a continuum of ancestry, from the first people to the present Native American populations of San Diego. To acknowledge this perspective, consultation with affected Native American communities can be beneficial to fully understand the impact to cultural resources. The consultation is typically administered pursuant to Senate Bill (SB) 18, described below in Section 2.5.2, Regulatory Framework.

Significant Historic Resources Sites***Historic Resources Surveys***

Several surveys have been performed to identify the resources found in some of the more urbanized communities in the County. These include:

- Ramona Historic Resources Inventory (conducted in September 1991)
- Sweetwater Valley Historic Resources Inventory (conducted in September 1990)
- Fallbrook Historic Resources Inventory (conducted in September 1991)
- Lakeside Historic Survey (conducted in 2001)
- Julian Historic Survey (conducted in September 2008)

These surveys provide general information on the potential significance of the resources found within the respective communities. This information can be utilized to determine when further detailed study is required and to protect resources at the site planning level. Over 400 historic sites have been identified throughout unincorporated San Diego County. Figure 2.5-2 identifies the location of these resources. As shown in this figure, historic resources in San Diego are most densely concentrated in the communities of Fallbrook, San Dieguito, Ramona, and Spring Valley. Historic resources also tend to be located along major roadways, including SR-94, I-8, SR-78, and SR-76. Table 2.5-2 provides a partial list of significant historical sites in unincorporated San Diego County, and selected sites are described in detail below. Table 2.5-2 represents sites that have been designated by the NRHP, are listed as a National or State

Historic Landmark, or are included in the San Diego County Historic Landmark Listing. Additional historic sites have been identified as historic and may be eligible for designation, but have not yet been listed. One designated historic district exists in unincorporated County, the Camp Lockett in Campo. The Julian Historic District is currently under evaluation for listing as a State and County Landmark and is shown on Figure 2.5-2. Other districts have been identified as historic and may be eligible for designation as a historical district, such as the Ellis Bishop House Historic District in Rancho Santa Fe.

Camp Lockett Historic District

Camp Lockett, located in the Milquatay Valley near Campo in the Mountain Empire CPA, was a World War II Mexican border cavalry post established in 1941. It was named after Colonel James Lockett, who was awarded two Silver Stars for “gallantry in action against insurgent forces” in the Philippine Islands during the Spanish American War. Eventually the camp housed prisoners of war until late in December 1942 when Camp Lockett was placed on standby status for future use as a convalescent center.

Camp Lockett is undoubtedly an important and significant chapter of San Diego’s history for many reasons. First, it was used by the cavalry throughout the war to perform important missions, such as patrolling the Southern California border and protecting resources vital to San Diego’s war effort. During the months before the U.S. entered the war, the soldiers scouted the mountains and made defensive plans in the event of a full-scale enemy invasion coming through Mexico. And in those first few tense days after Pearl Harbor, the cavalry made sure that the trains and trucks kept moving, the electric relay stations remained operable, and the City’s fresh water supplies continued flowing.

Camp Lockett’s most interesting legacy is the fact that it was the last horse cavalry base built in the U.S., and that the events played out there between 1941 and 1944 represent the end of a long and distinguished era in American history. Machines had taken over, and there was no longer a need for a cavalry platoon.

Guajome County Park

Guajome County Park, near Bonsall, is home to a historic adobe ranch house built in the 1850s. Originally, the land was owned by two Native Americans who received the 2,200-acre ranch as a land grant from the Mexican governor in 1845. Eventually the land was sold to a Los Angeles merchant, who gave a half-interest in the ranch to his sister-in-law, Ysidora Bandini, as a wedding gift. Her husband, Cave Johnson Coutts, was a young Army lieutenant. Coutts turned the ranch into the social and cultural center of North County. He held grand fiestas that attracted the social elite from the entire State. The rancho’s centerpiece was its adobe home, at 7,000 square feet and 28 rooms. Today the adobe stands as one of the best examples of Anglo-Hispanic architecture and has been designated both a State and National Historic Landmark.

Rancho Guejito

The Rancho, located in the North County Metro CPA, was originally granted by Mexican Governor Manuel Micheltorena to José María Orozco in 1845. Rancho Guejito covers more than 13,000 acres and is significant because it is the only Mexican land grant still existing in its original state. The land was originally proposed as a site for a State park, but now is currently used to raise cattle.

Bancroft Rock House

The Bancroft Rock House located in Spring Valley was built in 1887 by Huber Howe Bancroft, a well known historian. Between the years of 1882 and 1890, Bancroft published 39 volumes on the history of Alaska, Mexico, the U.S., and portions of Canada, some of which was written in the Rock House. The structure was designed to be fire-safe to protect and store an extensive collection of San Diego County's historical documents. The Rock House was given the status of National Historic Landmark in 1958, and since has become a museum displaying artifacts from Spring Valley.

Los Penasquitos Ranch House

Los Penasquitos Ranch House, located in Los Penasquitos Canyon Preserve, was built in 1823, making it one of the oldest existing structures in the San Diego region. The ranch was originally constructed by Captain Francisco Maria Ruiz, a Commandant of the San Diego Presidio. The area was rich in natural resources which made it ideal not only for Native American habitation, but also for the 19th century settlers. In 1846, Rancho Los Penasquitos was the first place of rest for General Stephen Watts Kearny and his Army of the West after the historic Battle of San Pasqual.

Important Roadways

Highway 80. U.S. Highway 80 spans 2,500 miles through eight states, going from downtown San Diego to Tybee Island, Georgia. Highway 80 is important because it was the first all-weather coast-to-coast route available to automotive travelers. The road, which was once called "The Broadway of America," served as an important route for tourism and commerce, including transportation of military supplies in times of war and agricultural products in times of peace. By 1974, in San Diego and Imperial counties, most of the highway was replaced by Interstate 8. The State Legislature recently made Old Highway 80 an historic route under Assembly Current Resolution No. 123 (Resolution Chapter 104, August 16, 2006).

Highway 395. U.S. Highway 395, also known as the "Three Flags Highway," is a 1,305-mile road running through some of the most scenic areas in the western U.S. At one time it stretched 1,490 miles in length, all the way from San Diego Bay near the U.S./Mexico international border to the Canadian border in Washington State. U.S. Highway 395 earned its name as the "Three Flags Highway" because it (almost) touched all three nations. Despite being reduced in 1969 for the improved 1-15, it still maintains its importance as a major north-south route along the eastern Sierra Nevada Mountains.

Historic Bridges

The Caltrans maintains a list of Historically Significant Bridges, including those which are either on the NRHP or eligible to be placed on the National Register. This database has the construction date of the bridges divided by County, some of which are located in the unincorporated County of San Diego. The only bridge in the inventory that is located in the unincorporated County and eligible for the National Register is the San Luis Rey River Bridge (57 0043Z), located near SR-76 in the Bonsall CPA. However, the Ostrich Creek Bridge in Fallbrook is designated historic on the San Diego County Historic Property Listing.

2.5.1.2 Paleontological Resources

Paleontological resources are the remains and/or traces of prehistoric life (exclusive of human remains, artifacts or features) that include the localities where fossils are collected and the sedimentary rock formations in which they were formed. The defining character of fossils is their geologic age. Fossils or fossil deposits are generally regarded as being older than 10,000 years, marking the end of the late Pleistocene and the beginning of the Holocene. Refer to Figure 2.5-1 for the geologic time scale.

Fossils result from the preservation of organic remains, which requires a unique combination of physical and biological factors. Skeletal tissue with a high percentage of mineral matter is the most readily preserved, while soft tissues not intimately connected with the skeletal parts are least likely to be preserved. For this reason, the fossil record contains a biased selection not only of types of organisms but also of parts of organisms. For example, two groups of abundant organisms in shallow marine environments are bivalve and gastropod mollusks and polychaete worms. However, whereas mollusks, with their calcium carbonate shells, are the dominant fossils in many marine formations, the polychaete worms are barely recognized in fossil deposits. The same can be said of vertebrate fossils. Much of the paleontological knowledge about mammals is based on teeth alone, the teeth being generally more durable than other parts of the skeleton. The best preserved fossils are of those organisms that lived within a sedimentary depositional environment or were buried by sediment shortly after death, thus partially insulating them from destructive chemical and physical processes.

Fossil remains commonly include marine shells, bones and teeth of fish, reptiles, and mammals, leaf assemblages, and petrified wood. Fossil traces include internal and external molds (impressions) and casts. Trace fossils include evidence of past activities of fossil organisms, such as footprints and trackways, burrows and boreholes, coprolites, nests and (packrat) middens. Fossils, fossil traces, and trace fossils are found in the sedimentary rocks and unconsolidated sediments of natural ancient environments such as oceans, rivers, lakes, deltas, beaches, and lagoons.

The majority of San Diego County fossils are represented by shells and/or tests (hard coverings) of marine invertebrates (corals, mollusks, crustaceans, and echinoderms). However, important skeletal remains of terrestrial vertebrates (reptiles, birds, and mammals) characterize certain geologic rock units and time intervals. The local terrestrial fossil record also consists of remains and impressions of plants including leaf assemblages and petrified wood.

A geologic formation is a body of rock identified by its lithic characteristics (e.g., grain size, texture, color, mineral content) and stratigraphic position. Formations are mapped at the Earth's surface or traced in the subsurface and are formally named and described in the geologic literature. The fossil content may also be a characteristic of a formation. There is a direct relationship between fossils and the geologic formations within which they are enclosed; therefore, with sufficient knowledge of the geology and stratigraphy of a particular area and the paleontological resource potential, it is possible to reasonably predict where fossils might or might not be found. This is the case in San Diego County where a general overview of the geologic setting provides a basis for reasonably predicting the location of paleontological resources.

San Diego County is underlain by a number of distinct geologic rock units (formations) that record portions of the past 450 million years of the Earth's history. In general, time periods late in geologic history are better represented than periods further back in time. In San Diego County, the geologic record is most complete for parts of the past 75 million years, represented by the Cretaceous Period, the Eocene, Oligocene, and Pliocene Epochs of the Tertiary Period, and the Pleistocene Epoch of the Quaternary Period (see Figure 2.5-1).

Geomorphic Regions and Occurrence of Fossils in San Diego County

A geomorphic province and its regions establish areas that contain particular assemblages of landforms, geology, and fossils. San Diego County lies within the Peninsular Ranges Province, which is divided into three regions: the Coastal Plain, the Peninsular Range, and the Salton Trough (the desert). This section describes the characteristics of each of these regions and the occurrence of fossils in each region. Refer to Section 2.6, Geology and Soils, for additional discussion regarding geologic units.

The fossil record preserved in the rocks of San Diego County is unique in many respects and consists of important fossils and fossil assemblages that are either poorly represented or altogether unknown in other areas of California and North America.

Coastal Plain Region

The Coastal Plain Region is bounded on the west by the Pacific Ocean and on the east by the western edge of the foothills, and lies mostly within the boundaries of incorporated cities. The following communities within the unincorporated County are all or partially located within the Coastal Plain Region:

- Pendleton/De Luz
- Valle de Oro
- County Islands
- Spring Valley
- North County Metropolitan
- Sweetwater
- San Dieguito
- Otay (west)
- Lakeside (west)

The Coastal Plain Region is an area characterized by interbedded marine and non-marine sedimentary rock units deposited over the last 75 million years. The sedimentary rocks contain paleontological resources and overlie a buried topography of plutonic crystalline rocks (igneous rock that cooled deep underground) composed of granite, granodiorite, etc. Plutonic crystalline rocks are igneous rocks that cooled deep underground. They were subsequently lifted up by geologic processes to form the County's mountains. Many of the level surfaces in the coastal areas, including most of the mesa tops and coastal benches, are elevated marine terraces, and these, as well as the broad, level floodplains of river valleys, are characteristic features of the Coastal Plain Region. Many sedimentary rock units containing paleontological resources are within the Coastal Plain Region, including:

- Unnamed Quaternary River Terrace deposits representing the sediments of ancient river courses and sometimes containing important vertebrate remains;

- Marine terrace deposits of the Bay Point Formation and the Lindavista Formation that have produced large and diverse assemblages of marine invertebrate fossils locally along the coast and inland to elevations of approximately 300 feet;
- Marine deposits of the San Diego Formation, which have produced one of the largest and most diverse assemblages of Pliocene marine fossils in the world;
- Fluvial sedimentary rocks of the Otay Formation, with so many well preserved remains that it is now considered the richest source of Oligocene terrestrial vertebrates in California;
- Fluvial sedimentary rocks of the Friars Formation and Member C of the Santiago Formation, which have produced the best preserved assemblages of middle and late Eocene terrestrial mammals in California; and
- Other formations, including the Capistrano, San Mateo, San Onofre Breccia, Monterey, Sweetwater, Mission Valley, Stadium Conglomerate, Ardath Shale, Torrey Sandstone, Delmar, Point Loma, and Lusardi Formations.

Fossils known from the Coastal Plain Region are widespread and locally abundant. Any of these formations that occur within the unincorporated County could contain paleontological resources. Table 2.5-3 summarizes fossil discoveries in the Coastal Plain Region.

Peninsular Ranges Region

The Peninsular Ranges Region covers most of San Diego County between the foothills of Cowles Mountain and Bernardo Mountain on the west and the steep escarpments of In-Ko-Pah Gorge and Palomar Mountain on the east. All of the Peninsular Ranges Region is located in the unincorporated County, except some areas along the western edge. The following community and subregional planning areas of the unincorporated County are all or partly located within the Peninsular Ranges Region:

- | | |
|--------------------|--|
| • Fallbrook | • Otay (east) |
| • Lakeside | • North County Metropolitan (east) |
| • Rainbow | • Jamul/Dulzura |
| • Pala/Pauma | • North Mountain |
| • Alpine | • Mountain Empire |
| • Bonsall | • Ramona |
| • Central Mountain | • Julian |
| • Valley Center | • Crest/Dehesa/Harbison Canyon/Granite Hills |

The Peninsular Ranges Region is primarily underlain by plutonic igneous rocks that formed from the cooling of molten magmas deep within the earth's crust. However, some sedimentary rock units have formed in Quaternary alluvial and alluvial fan deposits in many of the mountain valleys of the region and some of the more southern mountain valleys contain Quaternary peat deposits. Formations containing paleontological resources in the Peninsular Ranges Region of unincorporated San Diego County include:

- Sedimentary rock (sandstone, siltstone and conglomerate), including the Pauba Formation and the Temecula Arkose, that have filled the Warner Basin with up to 1,000 feet of upper Pliocene and lower to upper Pleistocene sediments and have yielded diverse assemblages of vertebrate fossils in southern Riverside County and could contain the same in San Diego County;
- Table Mountain Gravels that have yielded fossil remains of Miocene terrestrial mammals; and
- Jurassic metasedimentary rocks mapped as the Santiago Peak Volcanics that have produced rare, but important marine invertebrate fossils.

Known fossil occurrences in the Peninsular Ranges Region are extremely rare, but provide a glimpse of the potential for future discoveries of significant fossils in this portion of the County. The few fossil discoveries known from the Peninsular Ranges Region occur in areas of steep topography where erosion of sedimentary rocks has produced natural outcrops, such as in Jacumba Valley. In other areas of the Peninsular Ranges Region where sedimentary rocks occur but are not well exposed, such as Warner Valley, future grading activities may likely create artificial exposures with the potential for important fossil discoveries. Table 2.5-4 summarizes fossil discoveries in the Peninsular Ranges Region.

Salton Trough Region

San Diego County's eastern desert and Desert Subregional Planning Area lies within the Salton Trough Region. This entire region is located in the unincorporated County. The Salton Trough is the northern landward extension of the proto-Gulf of California, the deepest part of which currently lies beneath the Salton Sea. Dry lake beds, filled with sediments, are notable features of the region.

Sedimentary rock units in the Salton Trough Region that have produced important paleontological resources in San Diego County include, but are not limited to, the following:

- The Ocotillo Conglomerate and the Borrego Formation that have produced primarily Pleistocene mollusk and other invertebrate fossils as well as terrestrial vertebrate fossils;
- Imperial Group, from which a large number of excellently preserved, late Miocene to early Pliocene, subtropical to tropical, shallow water marine invertebrates (corals, mollusks, crustaceans, and echinoderms), have been found;
- The Palm Springs Group consisting of five formations (Arroyo Diablo Formation, Olla Formation, Tapiado Claystone, Hueso Formation, and Canebrake Conglomerate) that is important because its terrestrial vertebrate fossils provide critical information on the evolution and diversification of Pliocene through Pleistocene paleocommunities characteristic of this region's North American Land Mammal Ages;
- Other formations, including the Brawley and Split Mountain Formations, the Canebrake Conglomerate, and the Alverson Volcanics; and
- Later Quaternary alluvium, and older terraces, fan conglomerates, and valley-fill alluvium.

In the Salton Trough Region of the County almost all known fossil discoveries have been made in areas with natural outcrops of exposed sedimentary rocks. These exposures result from the combined factors of aridity, limited soil and vegetative cover, and episodic high rates of erosion. The Salton Trough Region is locally underlain by a thick sequence of Miocene, Pliocene, Pleistocene, and Holocene strata. Table 2.5-5 summarizes fossil discoveries in the Salton Trough Region.

Resource Potential Ratings and Sensitivity of Paleontological Resources

Sensitivity levels are rated for individual geologic formations, as it is the formation that contains the fossil remains. The sensitivity levels are the same as the resource potential ratings. For example, a formation with a high potential for containing important fossils has high sensitivity. Table 2.5-6 lists the formations in the County that are known to contain or have the potential to contain unique paleontological resources. The resource potential ratings and geologic formation sensitivity levels are also described below.

High

High resource potential and high sensitivity are assigned to geologic formations known to contain paleontological localities with rare, well-preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleoclimatic, paleobiological and/or evolutionary history (phylogeny) of animal and plant groups. In general, formations with high resource potential are considered to have the highest potential to produce unique invertebrate fossil assemblages or unique vertebrate fossils and are, therefore, highly sensitive.

Moderate

Moderate resource potential and moderate sensitivity are assigned to geologic formations known to contain paleontological localities. These geologic formations are judged to have a strong, but often unproven, potential for producing unique fossil remains.

Low

Low resource potential and low sensitivity are assigned to geologic formations that, based on their relatively young age and/or high-energy depositional history, are judged unlikely to produce unique fossil remains. Low resource potential formations rarely produce fossil remains of scientific importance and are considered to have low sensitivity. However, when fossils are found in these formations, they are often very significant additions to the geologic understanding of the area.

Marginal

Marginal resource potential and marginal sensitivity are assigned to geologic formations that are composed either of volcanoclastic (derived from volcanic sources) or metasedimentary rocks, but that nevertheless have a limited probability for producing fossils from certain formations at localized outcrops. Volcanoclastic rock can contain organisms that were fossilized by being covered by ash, dust, mud, or other debris from volcanoes. Sedimentary rocks that have been metamorphosed by heat and/or pressure caused by volcanoes or plutons are called metasedimentary. If the sedimentary rocks had paleontological resources within them, those

resources may have survived the metamorphism and still be identifiable within the metasedimentary rock, but since the probability of this occurring is so limited, these formations are considered marginally sensitive.

No Potential

No resource potential is assigned to geologic formations that are composed entirely of volcanic or plutonic igneous rock, such as basalt or granite, and therefore do not have any potential for producing fossil remains. These formations have no paleontological resource potential; therefore, they are not considered to be sensitive resources.

Resource Potential and Sensitivity of Geologic Formations in Unincorporated San Diego County

As shown in Figure 2.5-3, most of the unincorporated areas of San Diego County are underlain by geologic formations with no, low, or marginal paleontological resource potential and sensitivity and are therefore unlikely to contain important fossils. Nonetheless, areas of high and moderate sensitivity, which do have the potential to contain unique paleontological resources, are present in Camp Pendleton, the San Dieguito area, Spring Valley, and Otay Mesa in the Coastal Plains Region; Warner Valley and Jacumba Valley in the Peninsular Ranges Region; and the Anza Borrego Desert and Coyote Mountains in the Salton Trough Region.

2.5.1.3 *Human Remains*

Archaeological investigations within the unincorporated County have unearthed human remains from prior human occupations. Human remains can be considered cultural resources for a number of reasons. Some human remains are evidence of burial places which represent events, customs, or beliefs common to many cultures, locations, or time periods. Other human remains are unique representatives of specific people or events. Cemeteries and burial places traditionally have been regarded as sacred and inviolate, especially by those whose ancestors are buried there. Recently, the concern of Native Americans about appropriate and respectful disposition of burial remains and objects of their descendants has resulted in greater sensitivity toward those for whom a burial place has familial or cultural importance.

In addition to unearthed human remains that may have cultural significance, established cemeteries and burial places may also be considered a cultural resource. Within the unincorporated County, the Ellis Cemetery, Fallbrook Masonic Cemetery, Oddfellows Cemetery, and Ramona Nuevo Memory Gardens Cemetery are included on the San Diego County Historic Property Listing. Cemeteries and burial places that qualify for such listing often include town cemeteries and burial grounds whose creation and continuity reflect the broad spectrum of the community's history and culture; family burial plots that contribute to the significance of a farmstead; beautifully designed garden cemeteries that served as places of rest and recreation; graveyards that form an important part of the historic setting for a church or other religious building being nominated; formal cemeteries whose collections of tombs, sculptures, and markers possess artistic and architectural significance; single or grouped gravestones that represent a distinctive folk tradition; graves or graveyards whose survival is a significant or the only reminder of an important person, culture, settlement, or event; and burial places whose location, grave markers, landscaping, or other physical attributes tell something important about the people who created them (NPS 2008b).

2.5.2 Regulatory Framework

Cultural and paleontological resources in the County of San Diego are protected through a number of regulations at the federal, State, and local levels. Below is a listing and brief description of some of the various regulations and standards that relate to cultural and paleontological resources within the County.

2.5.2.1 Federal

Executive Order 12072 (1978) – Federal Space Management: Jimmy Carter

Executive Order 12072 requires the consideration of cultural resources of all kinds in the context of urban centers. This order directs agencies to give priority to siting their activities in central business areas. It requires that both the positive and negative cultural effects be considered.

Historic Sites, Buildings, Objects, and Antiquities Act

The Historic Sites, Buildings, Objects, and Antiquities Act of 1935 states that it is the national policy to preserve for the public use historic sites, properties, buildings, and objects of national significance. It gives the National Park Services (NPS) broad powers to execute the policy on both federal and non-federal lands. The Act also set up an advisory board to aid the Secretary of the Interior in implementing the Act. The National Natural Landmarks (NNL) Program was established in 1962 to recognize and encourage the conservation of outstanding examples of the country's natural history. NNLs are designated by the Secretary of the Interior, with the owner's concurrence, as being of national significance, defined as being one of the best examples of a biological community or geological feature within a natural region of the U.S.

National Historic Landmarks Program

The National Historic Landmarks Program, developed in 1982, identifies and designates National Historic Landmarks, and encourages the long range preservation of nationally significant properties that illustrate or commemorate the history and prehistory of the U.S. These regulations set forth the criteria for establishing national significance and the procedures used by the Department of the Interior for conducting the National Historic Landmarks Program.

National Historic Preservation Act (NHPA)

The NHPA was passed in 1966 and set the foundation for much of the more specific legislation that guides cultural resource protection and management in local jurisdictions such as the County of San Diego. The Act established an Advisory Council on Historic Preservation to help implement and monitor it.

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council a reasonable opportunity to comment on such undertakings. The goal of the Section 106 process is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties.

National Register of Historic Places (NRHP)

Developed in 1981, the NRHP is an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment. Listing of private property on the NRHP does not prohibit under federal law or regulation any actions which may otherwise be taken by the property owner with respect to the property.

Native American Graves Protection and Repatriation Act (NAGPRA)

Enacted in 1990, NAGPRA conveys to American Indians of demonstrated lineal descent, the human remains and funerary or religious items that are held by federal agencies and federally supported museums, or that have been recovered from federal lands. It also makes the sale or purchase of American Indian remains illegal, whether or not they derive from federal or Indian lands.

The Secretary of the Interior's Standards

The Secretary of the Interior is the head of the U.S Department of the Interior, which is nation's principal conservation agency. The department oversees agencies including the Bureau of Land Management, the Bureau of Indian Affairs, and the NPS.

The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation

The purpose of the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation of 1983 is to: 1) to organize the information gathered about preservation activities; 2) to describe results to be achieved by federal agencies, States, and others when planning for the identification, evaluation, registration and treatment of historic properties; and 3) to integrate the diverse efforts of many entities performing historic preservation into a systematic effort to preserve the nation's culture heritage.

The Secretary of Interior's Standards for Rehabilitation

Developed in 1986, the Secretary of the Interior's Standards for Rehabilitation are ten basic principles created to help preserve the distinctive character of a historic building and its site, while allowing for reasonable change to meet new needs.

The Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, 1995

The Secretary of the Interior's Standards for the Treatment of Historic Properties were developed to help protect the nation's irreplaceable cultural resources by promoting consistent preservation practices. The Standards are a series of concepts about maintaining, repairing and replacing historic materials, as well as designing new additions or making alterations; as such, they cannot, in and of themselves, be used to make essential decisions about which features of a historic property should be saved and which might be changed. But once an appropriate treatment is selected, the Standards provide philosophical consistency to the work.

2.5.2.2 State

State Historical Landmarks Program

The State Historical Landmarks Program places an emphasis on well-known places and events in California history. The goals of the program include the preservation and maintenance of registered landmarks, most of which include missions, early settlements, battles, and gold rush sites. As of January 2008, 1,044 historical landmarks had been registered.

State Points of Historical Interest Program

The State Points of Historical Interest Program was established in the effort to accommodate local historic properties not able to meet the restrictive criteria of the State Historical Landmarks Program. The Points of Historical Interest Program requires the participation of local governmental officials, such as the chairperson of the Board of Supervisors, in the approval process. As of July 1997, 816 properties had been listed on the Points of Historical Interest Program.

California Register of Historical Resources (CRHR)

The CRHR is an authoritative guide for use by State and local agencies, private groups, and citizens to identify the State's historical resources. An historical resource can include any object, building, structure, site, area, or place that is determined to be historically or archaeologically significant. The CRHR also identifies historical resources for State and local planning purposes, determines eligibility for State historic preservation grant funding, and provides a certain measure of protection under CEQA.

California Native American Graves Protection and Repatriation Act (Cal NAGPRA)

The Cal NAGPRA 2001 conveys to American Indians of demonstrated lineal descent, the human remains and funerary items that are held by State agencies and museums.

Public Resources Code (PRC)

The following PRC sections pertain to cultural resources:

PRC 5079-5079.65 – California Heritage Fund

PRC Section 5079-5079.65 outlines the appropriate uses of the California Heritage Fund. The fund shall be available, upon appropriation by the State Legislature, to implement laws providing for historical resource preservation, including, but not limited to, Section 5028 and Executive Order W-26-92, under criteria developed by the Office of Historic Preservation and adopted by the State Historical Resources Commission.

PRC 5097-5097.6 – Archaeological, Paleontological and Historical Sites

PRC Section 5097-5097.6 outlines the requirements for cultural resource analysis prior to the commencement of any construction project on State Lands. This section identifies that the unauthorized disturbance or removal of archaeological, historical, or paleontological resources

located on public lands is a misdemeanor. It prohibits the knowing destruction of objects of antiquity without a permit (expressed permission) on public lands, and provides for criminal sanctions. This section was amended in 1987 to require consultation with the California Native American Heritage Commission (NAHC) whenever Native American graves are found. Violations for the taking or possessing remains or artifacts are felonies.

PRC 5097.9-5097.991 – Native American Heritage

PRC Section 5097.9-5097.991 identifies that no public agency, and no private party using or occupying public property, or operating on public property, under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the U.S. Constitution and the California Constitution; nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require it. In addition, this section details the composition and responsibilities of the NAHC. The NAHC strives for the preservation and protection of Native American human remains, associated grave goods, and cultural resources. The NAHC has developed a strategic plan to assist the public, development community, local and federal agencies, educational institutions and California Native Americans to better understand problems relating to the protection and preservation of cultural resources and to serve as a tool to resolve these problems and create an awareness among lead agencies and developers of the importance of working with Native Americans (NAHC 2008). PRC Sections 5097.91 and 5097.98 were amended by State Assembly Bill 2641 in 2006. This bill authorizes the NAHC to bring an action to prevent damage to Native American burial grounds or places of worship and establishes more specific procedures to be implemented in the event that Native American remains are discovered.

Government Code (GC)

The following GC sections pertain to cultural resources:

GC Section 25373

GC Section 25373 gives authority to local Governments to acquire property for the preservation or development of a historical landmark. In addition, local Governments may provide special conditions or regulations for the protection, enhancement, perpetuation, or use of places, sites, buildings, structures, works of art and other objects having a special character or special historical or aesthetic interest or value.

GC Section 27288.2

GC Section 27288.2 requires the County Recorder to record a certified resolution establishing a historical resources designation issued by the State Historical Resources Commission or a local agency. For previously designated properties, the County may record the certified resolution establishing the historical resources designation upon submission.

GC Sections 50280-50290 – Mills Act

The Mills Act, implemented in unincorporated San Diego County through County Ordinance 9425 (amended by Ordinance 9628), provides for reduced property taxes on eligible historic properties in return for the property owner's agreement to maintain and preserve the historic property. Preservation of properties is to be in accordance with the standards and guidelines set forth by the Secretary of the Interior. There are approximately 1,120 structures within San Diego County currently under Mills Act contract in both in the unincorporated and incorporated areas (Smith 2002). In order to be designated, a building must meet qualifying criteria such as significant architecture, association with a historically significant event or person, or location in a historic district, such as Marston Hills.

Health and Safety Code (HSC)

Several HSCs pertain to cultural resources:

HSC Sections 18950-18961 – State Historic Building Code

HSC Sections 18950 through 18961 provides alternative building regulations and building standards for the rehabilitation, preservation, restoration (including related reconstruction), or relocation of buildings or structures designated as historic buildings. Such alternative building standards and building regulations are intended to facilitate the restoration or change of occupancy so as to preserve their original or restored architectural elements and features, to encourage energy conservation and a cost-effective approach to preservation, and to provide for the safety of the building occupants.

HSC 7050.5 - Human Remains

HSC Section 7050.5 requires that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. If the Coroner determines the remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall contact by telephone within 24 hours the Native American Heritage Commission. In addition, any person who mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor.

Penal Code Section 622 – Destruction of Historical Properties

The California Penal Code Section 622 provides that any person, not the owner thereof, who willingly destroys or injures objects of archaeological or historical value, whether on public or private land, is guilty of a misdemeanor.

Senate Bill (SB) 18 – Traditional Tribal Cultural Places

SB 18, enacted in 2004, requires local governments to consult with Native American groups at the earliest point in the local government land use planning process. The consultation intends to establish a meaningful dialogue regarding potential means to preserve Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. It allows for tribes

to hold conservation easements and for tribal cultural places to be included in open space planning.

2.5.2.3 *Local*

County of San Diego Code of Regulatory Ordinances Sections 87.101 -87.804, Grading, Clearing, and Watercourses Ordinance

Section 87.430 of the County's Grading and Clearing Ordinance provides for the requirement of a paleontological monitor at the discretion of the County. In addition, the suspension of grading operation is required upon the discovery of fossils greater than twelve inches in any dimension. The ordinance also requires notification of the County Official (e.g., Permit Compliance Coordinator). The ordinance gives the County Official the authority to determine the appropriate resource recovery operations, which shall be carried out prior to the County Official's authorization to resume normal grading operations.

Section 87.429 of the County's Grading and Clearing Ordinance requires that grading operations cease if human remains or Native American artifacts are found; and Section 87.216(a)(7) requires changes to grading plans/operations if it is determined that historic or archaeological resources may be located on site, in which case avoidance or mitigation will be required.

County of San Diego Code of Regulatory Ordinances Sections 86.601-86.608, Resource Protection Ordinance (RPO)

This ordinance requires that cultural resources be evaluated as part of the County's discretionary environmental review process and if any resources are determined significant under RPO, they must be preserved. RPO prohibits development, trenching, grading, clearing, and grubbing, or any other activity or use damaging to significant prehistoric or historic site lands, except for scientific investigations with an approved research design prepared by an archaeologist certified by the Society of Professional Archaeologists. Sites determined to be RPO significant must be avoided and preserved.

Zoning Ordinance

The County's Zoning Ordinance provides for the designation and regulation of "special areas." One type of special zoning area is a County Historic/Archaeological Landmark District. These resources may be assigned an "H" designator for historic areas or a specific district designator (e.g., Julian has a "J" designator). The purpose of these provisions is to identify, preserve, and protect the historic, cultural, archaeological and/ or architectural resource values of designated landmarks and districts. Zoning regulations for these resources are designed to preserve their integrity and content. Other types of resources of equal or greater significance may exist and be designated in other ways such as the NRHP or CRHR.

Resource Conservation Areas (RCAs)

County RCAs are identified lands requiring special attention in order to conserve resources in a manner best satisfying public and private objectives. The appropriate implementation actions will vary depending upon the conservation objectives of each resource but may include public

acquisition, establishment of open space easements, application of special land use controls such as cluster zoning, large lot zoning, scenic or natural resource preservation overlay zones, or by incorporating special design considerations into subdivision maps or special use permits. RCAs include, but are not limited, to the following: groundwater problem areas; coastal wetlands; native wildlife habitats; construction quality sand areas; littoral sand areas; astronomical dark sky areas; unique geologic formations; and significant archaeological and historical sites. County departments and other public agencies must give careful consideration and special environmental analysis to all projects located in RCAs.

San Diego County Local Register of Historical Resources

The purpose of the San Diego County Local Register of Historical Places is to develop and maintain “an authoritative guide to be used by State agencies, private groups, and citizens to identify the County’s historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from substantial adverse change.” Sites, places, or objects that are eligible to the NRHP or the CRHR are automatically included in the San Diego County Local Register of Historical Places.

San Diego County Historic Site Board

The County of San Diego Historic Site Board is an advisory body that provides recommendations to decision makers regarding archaeological and historic cultural resources. The Historic Site Board is responsible for reviewing resources seeking historic designation and participation in the Mills Act as well as discretionary projects with significant cultural resources.

2.5.3 Analysis of Project Impacts and Determination of Significance

2.5.3.1 Issue 1: Historical Resources

Guidelines for Determination of Significance

Section 5020.1 of the PRC defines a historic district as a definable unified geographic entity that possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. A historical landmark means any historical resource which is registered as a state historical landmark pursuant to Section 5021, and a historical resource includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

Based on Appendix G of the CEQA Guidelines, the proposed County General Plan Update would have a significant impact if it would result in a substantial adverse change in the significance of an historical resource as defined in Section 15064.5 of the State CEQA Guidelines or the County’s RPO through physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. The significance of a historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA Guidelines Section 15064.5(b)(2).

Definition of an Historical Resource

Section 15064.5(a) of the CEQA Guidelines defines “historical resources” as the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (Pub. Res. Code, Section 5024.1, Title 14 CCR, Section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the CRHR (Pub. Res. Code, Section 5024.1, Title 14 CCR, Section 4852 et. seq.) including the following:
 - a. Criterion A: Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage. Examples include resources associated with the Battle of San Pasqual, gold mining in the Julian area, or a Kumeyaay settlement.
 - b. Criterion B: Is associated with the lives of persons important in the past. Examples of significant resources include those associated with the lives of George W. Marston, Kate Sessions, John D. Spreckels, Ellen Browning Scripps, Ah Quin, Manuel O. Medina, Jose Manuel Polton (Hatam), or Jose Pedro Panto.

- c. Criterion C: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values. Resources representing the work of architects such as William Templeton Johnson, Irving Gill, Lilian Rice, or Hazel Waterman would be considered significant because they represent the work of an important creative individual; or if a resource is identified as a Queen Anne, Mission Revival, Craftsman, Spanish Colonial, or Western Ranch Style structure, it would be significant because it embodies the distinctive characteristics of a type or period.
 - d. Criterion D: Has yielded, or may be likely to yield, information important in history. For example, a historic stone dam would be significant because it is considered unique and is likely to yield information important to history.
4. The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

The following definition of an historical or archaeological resource was derived from the County's RPO:

- Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
 - Formally determined eligible or listed in the NRHP by the Keeper of the National Register; or
 - To which the Historic Resource ("H" Designator) Special Area Regulations have been applied; or
- One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials; and
- Any location of past or current sacred religious or ceremonial observances which is either:
 - Protected under Public Law 95-341, the American Indian Religious Freedom Act or PRC Section 5097.9, such as burials, pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures, or
 - Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

Impact Analysis

Significant historical resources are non-renewable and therefore cannot be replaced. The disturbance or alteration of a historical resource causes an irreversible loss of significant information. Regionally, the loss of historical resources results in the loss of cultural identity and a connection with the past.

Unincorporated San Diego County contains historical sites that are designated on local, State, and national historical lists and meet the definitions of historical resources under Section 15064.5(a) of the CEQA Guidelines or the County's RPO. These sites are described above in Section 2.5.1.1 and listed in Table 2.5-2. These resources include historical residences, school houses, stage depots, and cemeteries throughout the County. However, historical resources tend to be concentrated in the more developed areas of the County such as Spring Valley and San Dieguito, and in areas with established town centers, such as Ramona, Julian and Fallbrook. Historical resources are also generally located along major roadways in the County, such as I-8 and SR-78. In addition, some resources exist within the unincorporated County that are eligible to be historically significant but have not yet been designated.

Two types of typical adverse effects occur in relation to historical resources: direct and indirect effects. Direct impacts are caused by and are immediately related to a project, such as the demolition of an historical building. Indirect impacts are not immediately related to a project, but they are caused indirectly by a project. An example of an indirect impact would be the placement of trails in open space areas containing historical resources, which has the potential to impact historical resources indirectly through activities such as vandalism or degradation of the resources from increased access and use. Designated and potentially significant historical resources could be directly and/or indirectly impacted as a result of new private or public development or redevelopment allowable under the proposed General Plan Update. New development under the proposed General Plan Update could result in the destruction of historical resources through development activities such as grading, clearing, demolition, alteration, or structural relocation. The General Plan Update could also result in an increase in development intensity which could adversely affect historical sites through the introduction of visual, audible, or atmospheric effects that are out of character with the historical resources or alter the setting of the resources when the setting contributes to the resources' significance. The proposed General Plan Update may also result in the redevelopment of a historical structure or site that may result in the remodeling, alteration, addition, or demolition of a historical resource, or a change in use that is not compatible with the authenticity of the resource and that would substantially alter its significance. Additionally, infrastructure or other public works improvements associated with development allowable under the proposed General Plan Update could result in damage to or demolition of historical features.

Federal, State and Local Regulations and Existing Regulatory Processes

As identified in the Regulatory Framework section above, there are a number of federal, State, and local regulations in place to protect historical resources in the County, with which the General Plan Update is required to comply. The RPO requires that cultural resources be evaluated as part of the County's discretionary environmental review process and prohibits trenching, grading, clearing and grubbing, or any other activity or use damaging to significant historical site lands, except for scientific investigation with an approved research design prepared by a certified archaeologist. PRC Section 5097 outlines the requirements for a cultural resources analysis prior to construction on State lands, and the PRC and California Penal Code 622 make it a misdemeanor criminal offense to disturb or destroy historical resources without authorization. The Mills Act grants local governments the authority to directly implement a historic preservation program. The Mills Act serves as an economic incentive to owners to preserve their historic properties for the benefit of the entire community. State HSC 18950-1896 and the Secretary of the Interior's Standards for Rehabilitation provide regulations for the restoration or rehabilitation of historic structures to preserve their original or restored architectural elements and features, while providing a safe building for occupants. Additionally,

the Secretary of the Interior's Standards for the Treatment of Historic Properties were developed to help protect historical resources by promoting consistent preservation practices.

In addition to the above-mentioned regulations, designated historic resources are mapped in the County's GIS system and all permits are reviewed against these maps to ensure that appropriate reviews are undertaken to comply with State law. Additionally, Special Area Designators (discussed under Section 2.5.2.3, Issue 3: Paleontological Resources) are used to identify historic resources and require review through the Zoning Ordinance.

Reviews are also required through the County's discretionary review process pursuant to RPO and CEQA. The RPO requires a discretionary project to evaluate the historic eligibility of a resource; while CEQA requires a discretionary project to be analyzed for significant impacts to historical resources.

Proposed General Plan Update Goals and Policies

The Conservation and Open Space Element includes goals and policies to prevent the proposed General Plan Update from adversely impacting historical resources. Goal COS-8 in the Conservation and Open Space Element identifies the need to protect, conserve, use, and enjoy the County's important historic resources. Policy COS-8.1 supports this goal by encouraging the preservation and/or appropriate adaptive re-use of historic structures and the preservation of historical landscaping as a means of protecting important historical resources while respecting the heritage, context, design, and scale of older structures and neighborhoods.

Summary

Implementation of the proposed project would have the potential to result in substantial adverse changes to the significance of historical resources. Designated and potentially significant historical resources could be disturbed due to demolition, destruction, alteration, or structural relocation as a result of new private or public development or redevelopment allowable under the proposed General Plan Update. While existing County policies and regulations and proposed General Plan Update goals and policies are intended to protect historical resources, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project is concluded to result in a potentially significant impact to historical resources and specific implementation programs are identified as mitigation.

2.5.3.2 *Issue 2: Archaeological Resources*

Guidelines for Determination of Significance

As described above in Section 2.5.3.1, significant cultural resources are non-renewable and therefore cannot be replaced. The disturbance or alteration of a cultural resource causes an irreversible loss of significant information. Based on Appendix G of the CEQA Guidelines, the proposed County General Plan Update would have a potentially significant impact if it would cause a substantial adverse change in the significance of an archaeological resource as defined by PRC Section 21083.2, State CEQA Guidelines Section 15064.5(a), and the criteria provided below. This shall include the destruction or disturbance of an important archaeological site or

any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.

Definition of an Archaeological Resource

PRC Section 21083.2 defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Under the CEQA Guidelines, archaeological resources may also be considered historical resources. Therefore, definitions of archaeological resources, as defined in Section 15064.5 of the CEQA Guidelines and the County's RPO, are the same as those provided above in Section 2.5.3.1, Issue 1: Historical Resources. Please refer to this section for definitions of archaeological (historical) resources.

Impact Analysis

The proposed General Plan Update could result in an adverse change in the significance of archaeological resources by proposing the development of land uses that would result in ground-disturbing activities without proper regulation and monitoring. Such alteration of archaeological resources may result in a loss of valuable information that could be gained from the resources, or prevent potentially eligible sites from being listed on a register of cultural resources. Ground-disturbing activities, such as clearing, excavation and grading, have the potential to damage or destroy archaeological resources that may be present on or below the ground surface, particularly in areas that have not previously been developed.

Cultural resources exist in many undeveloped and developed areas, in town centers, and under agricultural lands. Although the potential exists for cultural resources to exist in all proposed land use designations, some land uses have a greater potential to impact cultural resources than others. The proposed General Plan Update would designate higher density land uses in the western portion of the unincorporated County. Therefore, the western portion of the unincorporated County would experience increased impacts to archaeological resources as compared to other parts of the County, because higher density land uses are more likely to result in development that requires extensive excavation or grading activities during construction or utility installation. However, areas within the eastern portion of the unincorporated County would also experience potential impacts to archaeological resources from development allowable under the proposed General Plan Update and the installation of septic tanks or access roads, although to a lesser extent than areas within the western portion of the County.

Although most land uses proposed under the General Plan Update would allow for excavation and grading activities during development, some land uses would result in greater land disturbance activities than others, and would therefore be more likely to result in impacts to

archaeological resources. For example, areas designated for village residential, commercial or industrial land uses would be more likely to result in construction activities that involve extensive excavation or grading activities than some of the lower intensity land use designations. Impacts to archaeological resources in areas designated for higher intensity land uses would be likely to occur. In contrast, open space recreation or open space conservation land use designations would generally not allow land uses that would involve excavation or grading activities during construction. Therefore, impacts to archaeological resources in areas with these land use designations would generally not occur.

While many archaeological sites are known and have been recorded, there is the potential for unknown archaeological resources to exist within the County, particularly in areas that have not previously been surveyed for resources. The location of past discoveries of archaeological resources can be useful in determining where potential impacts to unknown archaeological resources may occur. For example, the earliest known archaic sites in San Diego County are found near coastal lagoons and river valleys, while Late Period archaeological sites are found on the northern and eastern periphery of San Diego County. Therefore, construction activities in coastal lagoons, river valleys or periphery areas of the County would be more likely to result in potentially significant impacts to archaeological resources than construction activities in other areas of the County.

Additionally, archaeological resources may also be subject to indirect impacts as a result of land use development activities that increase erosion, fugitive dust, or the accessibility of a surface or subsurface resource, and thus increase the potential for the degradation of the resource.

Federal, State and Local Regulations and Existing Regulatory Processes

The proposed General Plan Update would comply with all applicable regulations pertaining to archaeological resources, such as NAGPRA, Cal NAGPRA, PRC Section 5079, CEQA Section 210831, and the County RPO. NAGPRA requires the repatriation of funerary or religious items held by federal agencies or federally funded museums, or removed from federal land, to the American Indians of demonstrated lineal descent. Cal NAGPRA requires the repatriation of such items from State agencies, museums, and lands. PRC Section 5079 outlines the requirements for cultural resource analysis prior to construction on State lands, and makes it a misdemeanor criminal offense to disturb or remove archaeological resources without authorization, and prohibits severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except with a clear and convincing showing that the public interest and necessity so require it. The County RPO prohibits trenching grading, clearing and grubbing, or any other activity or use damaging to significant archaeological site lands, except for scientific investigation with an approved research design prepared by a certified archaeologist. In addition to RPO compliance, all discretionary approvals are also subject to CEQA which requires consideration of potential impacts to archaeological resources. The County employs several archaeological specialists that review projects and access local and regional databases to determine if further study is necessary. In addition, because of the potential presence of unknown, archaeological resources, previously unsurveyed properties are surveyed, as necessary.

Proposed General Plan Update Goals and Policies

The proposed General Plan Update contains several policies in the Conservation and Open Space Element that would reduce potential impacts to archaeological resources. Goal COS-7 requires protection and preservation of the County's important archaeological resources for research and education potential. Policies COS-7.1, COS-7.2, COS-7.3, COS-7.4 support this goal by describing how archaeological resources should be protected. Policy COS-7.1 requires new development to include appropriate mitigation to protect the quality and integrity of important archaeological resources, as defined by the PRC. Policy COS-7.2 seeks to avoid archaeological resources and protect them in open space easements whenever possible. When complete avoidance is not possible, resources would be incorporated into project design and/or impacts would be mitigated through the completion of a data recovery program. Policy COS-7.3 requires curation of collected archaeological resources at a San Diego facility that meets federal standards. Policy COS-7.4 requires consultation with local Native American tribes concerning the preservation and treatment of tribal archaeological resources and support of appropriate signage.

Summary

Implementation of the proposed General Plan Update would have the potential to result in a substantial adverse change in the significance of an archaeological resource, including the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory. The western portion of the unincorporated County would experience increased impacts to archaeological resources as compared to other parts of the County, because the higher density land uses proposed in this area are more likely to result in ground disturbing activities during construction that would impact archaeological resources. Similarly, areas designated for village residential, commercial, industrial, or other high intensity land uses would be likely to result in impacts to archaeological resources from construction activities that involve extensive clearing, excavation or grading. While existing County policies and regulations and proposed General Plan Update goals and policies are intended to protect archaeological resources, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project is concluded to result in a potentially significant impact to archaeological resources and specific implementation programs are identified as mitigation.

2.5.3.3 *Issue 3: Paleontological Resources*

Guidelines for Determination of Significance

Based on Appendix G of the CEQA Guidelines, the proposed County General Plan Update would have a significant impact if it would directly or indirectly destroy a unique paleontological resource or site.

Definition of a Unique Paleontological Resource

For the purposes of this EIR, a unique paleontological resource is any fossil or assemblage of fossils, paleontological resource site, or formation that meets any one of the following criteria:

- Is the best example of its kind locally or regionally
- Illustrates a life-based geologic principle (e.g., faunal succession)
- Provides a critical piece of paleobiological data (illustrates a portion of geologic history or provides evolutionary, paleoclimatic, paleoecological, paleoenvironmental or biochronological data)
- Encompasses any part of a “type locality” of a fossil or formation
- Contains a unique or particularly unusual assemblage of fossils
- Occupies a unique position stratigraphically within a formation
- Occupies a unique position, proximally, distally or laterally within a formation’s extent or distribution

Impact Analysis

Impacts to paleontological resources generally occur from the physical destruction of fossil remains by excavation operations that cut into geologic formations. Trenching and tunneling activities may also result in impacts to paleontological resources. When such activities occur, potential impacts are limited to the immediate area of disturbance. The covering of undisturbed paleontological sites would not represent a potentially significant impact, as the resources would be left intact and would not be destroyed. Because paleontological resources are typically located underground and, therefore, not apparent until revealed by excavation, the potential for significant impacts to paleontological resources to occur is based on the extent that a geologic formation would be disturbed and the potential for those geologic formations to contain fossils.

Activities resulting from implementation of the proposed General Plan Update, especially construction-related and earth-disturbing actions, could damage or destroy fossils in the underlying rock units. Loss or alteration of paleontological resources may result in an irreversible loss of significant information that could be obtained from these non-renewable resources. Although most land uses proposed under the General Plan Update would allow for excavation and grading activities during development, some land uses would result in greater land disturbance activities than others, and would therefore be more likely to result in impacts to paleontological resources than others. For example, the proposed General Plan Update would designate higher density land uses in the western portion of the unincorporated County. Higher density land uses, such as village residential, commercial or industrial, would be more likely to result in development that requires extensive excavation or grading activities than lower density uses. Impacts to paleontological resources in areas designated for higher density land uses, including areas in the western portion of the County as well as town center areas in the eastern portion of the County, would be potentially significant. In contrast, open space recreation or open space conservation land use designations would generally not allow land uses that would involve excavation or grading activities during construction. Therefore, impacts to paleontological resources in areas with low density land use designations would have a low potential to occur.

As previously discussed, paleontological resources potentially occur in sedimentary geologic formations. Ground-disturbing activities in high or moderate sensitivity fossil-bearing geologic formations have the potential to damage or destroy paleontological resources that may be present below the ground surface. Potentially fossil-bearing geologic formations are generally concentrated along the western and eastern boundaries of the unincorporated County, as

shown in Figure 2.5-3. CPAs and Subregions with high and moderate paleontological sensitivity include Pendleton/De Luz, Pala/Pauma, North County Metro, San Dieguito, Ramona, Lakeside, Valle De Oro, Sweetwater, Spring Valley, Jamul/Dulzura, Otay, Mountain Empire, Desert, and North Mountain. Under implementation of the General Plan Update, many of the CPAs and Subregions with high and moderate paleontological sensitivity, such as North County Metro, San Dieguito, Ramona, Lakeside, Valle De Oro, Alpine and Otay, would be designated for high density land uses. As discussed above, areas designated for high density land uses would be likely to experience extensive excavation and earthwork during construction activities that would have the potential to impact underlying formations containing paleontological resources. Therefore, development of land uses designated by the proposed General Plan Update would have the potential to significantly impact paleontological resources.

It should also be noted that areas with marginal or low paleontological sensitivity are located throughout the eastern, central and western portions of the unincorporated County. Although the General Plan Update proposes both high and low density land uses throughout these areas, it is unlikely that paleontological resources would be impacted by development of land uses in the areas of the County where paleontological sensitivity is considered marginal or low. Impacts in these areas would be less than significant.

Federal, State and Local Regulations and Existing Regulatory Processes

Several regulations currently provide for the protection of paleontological resources, such as PRC Section 5097, the County Grading Ordinance, and CEQA. PRC Section 5097 makes it a misdemeanor criminal violation to disturb or remove paleontological resources without authorization. The County Grading Ordinance requires a paleontological monitor to be present during grading or excavation activities at the discretion of the County, mandates the suspension of grading operations upon the discovery of fossils greater than 12 inches in any dimension, and gives the appropriate County Official, such as the Permit Compliance Coordinator, the authority to determine the appropriate resource recovery operations, which shall be carried out prior to the County Official's authorization to resume normal grading operations. CEQA also requires review of discretionary projects with regard to potential impacts to paleontological resources. The County's review of potential impacts to paleontological resources is conducted pursuant to its Guidelines for Determining Significance, Paleontological Resources.

Proposed General Plan Update Goals and Policies

The General Plan Update includes one goal and policy in the Conservation and Open Space Element that would protect paleontological resources. Goal COS-9 requires that paleontological resources and unique geologic features be conserved for educational and/or scientific purposes. Policy COS-9.1 supports this goal by requiring the salvage and preservation of unique paleontological resources when exposed to the elements during excavation, grading activities, or other development practices.

Summary

Implementation of the proposed General Plan Update would have the potential to directly or indirectly destroy a unique paleontological resource or site. Areas of the County designated for high density land uses, such as village residential, commercial or industrial, that also have a high or moderate paleontological sensitivity, would have the potential to significantly impact paleontological resources from extensive excavation or grading activities associated with

development. This includes any CPAs or Subregions in the unincorporated County with high or moderate paleontological sensitivity that are proposed for high density land uses under the General Plan Update. The western portion of the unincorporated County is designated for higher density land uses and would therefore experience increased impacts to paleontological resources as compared to other parts of the County, because higher density land uses are more likely to result in development that requires extensive excavation or grading activities, which has the potential to impact paleontological resources. While existing County policies and regulations and proposed General Plan Update goals and policies are intended to protect unique paleontological resources, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project is concluded to result in a potentially significant impact to unique paleontological resources and specific implementation programs are identified as mitigation.

2.5.3.4 *Issue 4: Human Remains*

Guidelines for Determination of Significance

Based on Appendix G of the CEQA Guidelines, the proposed County General Plan Update would have a significant impact if it would disturb any human remains, Native American or otherwise, including those interred outside of formal cemeteries. Section 15064.5(d) and (e) of the CEQA Guidelines assign special importance to human remains and specify procedures to be used when Native American remains are discovered. These procedures are detailed under PRC Section 5097.98, described in Section 2.5.2.2.

Impact Analysis

Archaeological materials, including human burials, have been found throughout unincorporated San Diego County. Human burials have occurred outside of formal cemeteries, usually associated with archaeological resource sites and prehistoric peoples. Therefore, areas with known archaeological resources sites may have a higher risk for containing human remains. As described above in Section 2.5.3.2, the location of most of these sites is kept confidential in order to protect these resources; however, resources throughout the County include remains left by local Native Americans and other early inhabitants, including the Late Prehistoric, La Jolla, San Dieguito, Pauma, Kumeyaay, and Luiseño complexes.

The disturbance of any human remains is considered a significant impact, regardless of archaeological significance or association. While some burials have been uncovered, the potential exists for unknown burials to be present, including Native American burials. As evident from human remains that were previously discovered throughout the unincorporated County, there is the potential for impacts to human remains to occur as the result of development allowable under the proposed General Plan Update. Ground disturbing impacts, including grading, excavation, and utilities installation during construction, would have the potential to cause adverse impacts to currently undiscovered human remains. The potential for disturbance may be reduced through surveying a site to determine the likelihood that human remains are present, review of archaeological records to determine if human remains are known to occur in the area, and then designing the project to avoid areas where burials may be present. However, if surface evidence and archaeological records do not exist for a site, construction activities associated with the development of land uses consistent with the General Plan Update,

including grading and excavation, would have the potential to disturb human remains. As discussed above, any disturbance is considered to be a significant impact.

Federal, State and Local Regulations and Existing Regulatory Processes

Native American human burials have specific provisions for treatment in PRC Section 5097, as amended by Assembly Bill 2641, which addresses the disposition of Native American burials, protects such remains, and establishes the NAHC to resolve any related disputes. Additionally, Cal NAGPRA requires repatriation of Native American human remains and funerary items that are held by State agencies and museums. Disturbing human remains would destroy the resources and could potentially violate the health code. The California HSC Section 7050.5 has specific provisions for the protection of human burial remains, Native American or otherwise, if they are discovered, as described above in Section 2.5.2.2. HSC Section 7050.5 requires that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. In addition, any person who mutilates or disinters, wantonly disturbs, or willfully removes human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor criminal offense.

Proposed General Plan Update Goals and Policies

The General Plan Update includes goals and policies intended to protect human remains. Within the Conservation and Open Space Element, Goal COS-7 is to protect and preserve the County's important archaeological resources for their cultural importance to local communities, as well as their research and educational potential. Policy COS-7.5 supports this goal by requiring that human remains be treated in a sensitive and proper manner.

Summary

Implementation of the proposed General Plan Update would have the potential to disturb human remains, including those located outside of formal cemeteries. Ground-disturbing activities from the development of land uses proposed in the General Plan Update would have the potential to cause adverse impacts to human remains. While existing County policies and regulations and proposed General Plan Update goals and policies are intended to reduce impacts associated with human remains, specific measures that implement these policies and regulations are proposed to ensure that the intended protections are achieved. Therefore, the proposed project is concluded to result in a potentially significant impact to human remains and specific implementation programs are identified as mitigation.

2.5.4 Cumulative Impacts

The geographic scope of cumulative impact analysis for cultural resources varies depending on the type of resource with potential to be impacted. Geographic scope can be the entire area within which the resource has the potential to occur. For the purpose of this EIR, the geographic scope for the cumulative analysis of cultural resources is the southern California region, including both incorporated and unincorporated areas of San Diego County, surrounding counties and Mexico. The geographic scope for the cumulative analysis of paleontological

resources includes the Salton Trough, Peninsular Ranges, and Coastal Plain regions within southern California.

2.5.4.1 *Issue 1: Historical Resources*

Cumulative projects located in the southern California region would have the potential to result in a cumulative impact associated with the loss of historical resources through the physical demolition, destruction, relocation, or alteration of a resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. Cumulative projects that would have the potential to result in adverse impacts to historical resources from development activities include the SCAG RTP, SANDAG RTP, private projects not included in the General Plan Update, and the development of land uses as designated under surrounding jurisdictions general plans. These projects are regulated by federal, State and local regulations, including PRC Section 5097, California Penal Code 622, the Mills Act, State HSC 18950-1896, and the Secretary of the Interior's Standards for Rehabilitation and Standards for the Treatment of Historic Properties, and would be required to comply with these regulations. However, cumulative projects located in Mexico would not be subject to compliance with such regulations. Additionally, even with regulations in place, individual historical resources would still have the potential to be impacted or degraded from demolition, destruction, alteration, or structural relocation as a result of new private or public development or redevelopment allowable under cumulative projects. Therefore, the cumulative destruction of significant historical resources from construction and development planned within the region would be considered to be a cumulatively significant impact. Additionally, past projects involving development and construction have already impacted historical resources within the region.

As discussed above in Section 2.5.3.1, Issue 1: Historical Resources, implementation of the proposed project would have the potential to result in substantial adverse changes to the significance of historical resources due to demolition, destruction, alteration, or structural relocation as a result of new private or public development or redevelopment allowable under the proposed General Plan Update. Therefore, the proposed project, in combination with the identified cumulative projects, would have the potential to result in a significant cumulative impact associated with historical resources.

2.5.4.2 *Issue 2: Archaeological Resources*

Cumulative projects located in the southern California region would have the potential to result in a cumulative impact associated with the loss of archaeological resources through development activities that could cause a substantial adverse change in the significance of an archaeological resource. Cumulative projects that may result in significant impacts from include any projects that involve ground disturbing activities, and include but are not limited to: tribal projects, energy and utility projects, private projects not included in the General Plan Update, or the development of land uses as designated under surrounding jurisdictions general plans. These projects would be regulated by applicable federal, State and local regulations, including NAGPRA, Cal NAGPRA, Section 106 of the NHPA, PRC Section 5079, CEQA Section 21083.2, and the County RPO. However, cumulative projects located in Mexico would not be subject to compliance with such regulations. Additionally, the loss of archaeological resources on a regional level may not be adequately mitigable through the data recovery and collection methods specified in these regulations, as their value may also lie in cultural mores and religious beliefs of applicable groups. Therefore, the cumulative destruction of significant

archaeological resources from planned construction and development projects within the region would be cumulatively significant. Additionally, past projects involving development and construction have already impacted archaeological resources within the region.

As discussed in Section 2.5.3.2 above, implementation of the proposed General Plan Update would have the potential to result in a substantial adverse change in the significance of an archaeological resource, including the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory. Therefore, the proposed project, in combination with the identified cumulative projects, would have the potential to result in a significant cumulative impact associated with archaeological resources.

2.5.4.3 *Issue 3: Paleontological Resources*

Cumulative projects located in the southern California region would have the potential to result in a cumulative impact associated with paleontological resources from extensive grading, excavation or other ground-disturbing activities. Cumulative project that require significant excavation, such as regional energy and utility projects or the construction of new roadways under the SCAG RTP or SANDAG RTP would result in adverse impacts to paleontological resources. Additionally, if a cumulative project that requires excavation or grading is located in an area of high or moderate sensitivity, this would result in an increased potential for an adverse impact to a paleontological resource to occur. Cumulative projects on State or public lands would be required to comply with PRC Section 5097-5097.6 pertaining to impacts to paleontological resources. Most other cumulative projects would be regulated by State and local regulations, including CEQA and the County Grading Ordinance. However, cumulative projects located in Mexico would not be subject to compliance with such regulations. Additionally, the loss of paleontological resources on a regional level may not be adequately mitigable through methods specified in these regulations. Therefore, the cumulative destruction of significant paleontological resources from planned construction and development within the region would be cumulatively significant. Additionally, past projects involving development and construction have already impacted paleontological resources within the region.

As discussed in Section 2.5.3.3, Issue 3: Paleontological Resources above, areas of the County designated for high density land uses under the General Plan Update, such as village residential, commercial or industrial, that also have a high or moderate paleontological sensitivity, would have the potential to significantly impact paleontological resources from construction activities associated with development. Therefore, the proposed project, in combination with the identified cumulative projects, would have the potential to result in a significant cumulative impact associated with paleontological resources.

2.5.4.4 *Issue 4: Human Remains*

Cumulative projects located in the southern California region would have the potential to result in impacts associated with human remains due to grading, excavation or other ground-disturbing activities. Projects that may result in adverse impacts to human remains from development activities include the SCAG RTP, SANDAG RTP, private projects not included in the General Plan Update, or the development of land uses as designated under surrounding jurisdictions general plans. Cumulative projects would be required to comply with NAGPRA, PRC Section 5097.9-5097.991, Cal NAGPRA, and HSC Section 7050.5, if human remains were

encountered during project development. However, cumulative projects located in Mexico would not be subject to compliance with such regulations; although these projects would not contribute to a significant cumulative impact because impacts would be limited to the immediate vicinity. Additionally, on a regional level, the disturbance of human remains that are also considered archaeological resources may not be adequately mitigable through methods specified in these regulations, as their value may also lie in cultural mores and religion beliefs of applicable groups. Therefore, the cumulative disturbance of human remains by construction and development within the region would be considered a cumulatively significant impact. Additionally, past projects involving development and construction have already impacted human remains within the region.

As discussed in Section 2.5.3.4, Issue 4: Human Remains above, implementation of the proposed General Plan Update would have the potential to disturb human remains, including those located outside of formal cemeteries, from ground-disturbing activities associated with the development of land uses proposed in the General Plan Update. Therefore, the proposed project, in combination with the identified cumulative projects, would have the potential to result in a significant cumulative impact associated with human remains resources.

2.5.5 Significance of Impact Prior to Mitigation

The proposed General Plan Update would result in potentially significant direct impacts to historical resources, archaeological resources, paleontological resources and human remains prior to mitigation. The proposed project would also have the potential to result in significant cumulative impacts associated with historical resources, archaeological resources, paleontological resources and human remains.

2.5.6 Mitigation

2.5.6.1 Issue 1: Historical Resources

The following General Plan Update policy and mitigation measures would mitigate direct and cumulative impacts to historical resources to below a significant level.

Proposed General Plan Update Policies

Policy COS-8.1: Preservation and Adaptive Reuse. Encourage the preservation and/or adaptive reuse of historic sites, structures, and landscapes as a means of protecting important historic resources.

Mitigation Measures

- Cul-1.1** Utilize the RPO, CEQA, the Grading and Clearing Ordinance, and the Zoning Ordinance to identify and protect important historic and archaeological resources by requiring appropriate reviews and applying mitigation when impacts are significant.
- Cul-1.2** Provide incentives through the Mills Act to encourage the restoration, renovation, or adaptive reuse of historic resources.

- Cul-1.3** Initiate a new effort to identify and catalog historic and potentially historic resources within unincorporated San Diego County. This process will require public participation and evaluation by County staff and the Historic Site Board. The anticipated result of this effort is: 1) at minimum, landowners will be better informed of potential resources on their properties as well as the options available to them under the State/National Register or the Mills Act; and 2) in some cases, properties may be zoned with a special area designator for historic resources, thereby restricting demolition/removal and requiring a Site Plan permit for proposed construction which will be reviewed by the Historic Site Board.
- Cul-1.4** Support the Historic Site Board in their efforts to provide oversight for historic resources.
- Cul-1.5** Ensure landmarking and historical listing of County owned historic sites.
- Cul-1.6** Implement, and update as necessary, the County's Guidelines for Determining Significance for Cultural Resources to identify and minimize adverse impacts to historic and archaeological resources.

2.5.6.2 Issue 2: Archaeological Resources

The following General Plan Update policies and mitigation measures would mitigate direct and cumulative impacts to archaeological resources to below a significant level.

Proposed General Plan Update Policies

Policy COS-7.1: Archaeological Protection. Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.

Policy COS-7.2: Open Space Easements. Require development to avoid archaeological resources whenever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.

Policy COS-7.3: Archaeological Collections. Require all collections to be placed in a local curation facility that meets federal standards per 36 CFR Part 79, with the exception of those required by law to be repatriated.

Policy COS-7.4: Consultation with Affected Communities. Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.

Mitigation Measures

Mitigation measures Cul-1.1 and Cul-1.6 above are relevant to this issue and are incorporated here by reference. In addition, the following mitigation measures would be implemented to reduce impacts to archaeological resources.

- Cul-2.1** Develop management and restoration plans for identified and acquired properties with cultural resources.
- Cul-2.2** Facilitate the identification and acquisition of important resources through collaboration with agencies, tribes, and institutions, such as the South Coast Information Center (SCIC), while maintaining the confidentiality of sensitive cultural information.
- Cul-2.3** Support the dedication of easements that protect important cultural resources by using a variety of funding methods, such as grant or matching funds, or funds from private organizations.
- Cul-2.4** Protect significant cultural resources through regional coordination and consultation with the NAHC and local tribal governments, including SB-18 review.

2.5.6.3 Issue 3: Paleontological Resources

The following General Plan Update policy and mitigation measures would mitigate direct and cumulative impacts to paleontological resources to below a significant level.

Proposed General Plan Update Policies

Policy COS-9.1: Preservation. Require the salvage and preservation of unique paleontological resources when exposed to the elements during excavation or grading activities or other development processes.

Mitigation Measures

- Cul-3.1** Implement the Grading Ordinance and CEQA to minimize impacts to paleontological resources, require a paleontological resources monitor during grading when appropriate, and apply appropriate mitigation when impacts are significant.
- Cul-3.2** Implement, and update as necessary, the County's Guidelines for Determining Significance for Paleontological Resources to identify and minimize adverse impacts to paleontological resources.

2.5.6.4 Issue 4: Human Remains

The following General Plan Update policy and mitigation measure would mitigate direct and cumulative impacts to human remains to below a significant level.

Proposed General Plan Update Policies

Policy COS-7.5: Treatment of Human Remains. Require human remains be treated with the utmost dignity and respect.

Mitigation Measures

Mitigation measures Cul-1.1 and Cul-1.5 above are relevant to this issue and are incorporated here by reference. In addition, the following mitigation measures would be implemented to reduce impacts to human remains.

Cul-4.1 Include regulations and procedures for discovery of human remains in all land disturbance and archaeological-related programs. Ensure that all references to discovery of human remains promote preservation and include proper handling and coordination with Native American groups. Apply appropriate mitigation when impacts are significant.

2.5.7 Conclusion

The discussion below provides a synopsis of the conclusion reached in each of the above impact analyses, and identifies the level of impact that would occur after General Plan Update policies and mitigation measures are implemented.

2.5.7.1 *Issue 1: Historical Resources*

Implementation of the proposed General Plan Update would result in new development that would have the potential to result in substantial adverse changes to the significance of historical resources. Therefore, the proposed project would result in a potentially significant impact to historical resources. Additionally, the proposed project would result in a potentially significant cumulative impact prior to mitigation. However, the proposed General Plan Update policies and mitigation measures identified in Section 2.5.6.1 would mitigate potentially significant direct and cumulative impacts identified for the proposed project to a less than significant level.

2.5.7.2 *Issue 2: Archaeological Resources*

Implementation of the proposed General Plan Update would result in new development that would have the potential to cause a substantial adverse change in the significance of an archaeological resource, including the destruction or disturbance of an archaeological site that contains or has the potential to contain information important to history or prehistory. Therefore, the proposed project would result in a potentially significant impact to archaeological resources. Additionally, the proposed project would result in a potentially significant cumulative impact prior to mitigation. However, the proposed General Plan Update policies and mitigation measures identified in Section 2.5.6.2 would mitigate the proposed project's potentially significant direct and cumulative impacts related to archaeological resources to a less than significant level.






2.5.7.3 *Issue 3: Paleontological Resources*

Implementation of the proposed General Plan Update would result in new development that would have the potential to adversely impact unique paleontological resources. Therefore, the proposed project would result in a potentially significant impact to paleontological resources. Additionally, the proposed project would result in a potentially significant cumulative impact prior to mitigation. However, the proposed General Plan Update policy and mitigation measure identified in Section 2.5.6.3 would mitigate proposed project's potentially significant direct and cumulative impacts related to paleontological resources to a less than significant level.

2.5.7.4 *Issue 4: Human Remains*

Implementation of the proposed General Plan Update would result in new development that would have the potential to disturb human remains, including those discovered outside of formal cemeteries. Therefore, the proposed project would result in a potentially significant impact associated with human remains. Additionally, the proposed project would result in a potentially significant cumulative impact prior to mitigation. However, the proposed General Plan Update policy and mitigation measure identified in Section 2.5.6.4 would mitigate potentially significant direct and cumulative impacts related to human remains to a less than significant level.

Table 2.5-1. Terminology for Culture History in the San Diego Area

Geologic Time	Period	Years Before Present	Other Names	Diagnostic Cultural Material
Late Holocene	Late Period ↑↓	Present	Historic/Contact Precontact/Yuman Kumeyaay/Luiseno Cuyamaca Complex San Luis Rey I, II 	Bow-and-arrow, small triangular and side-notched points, cremations, fish hooks, ceramics, Obsidian Butte obsidian
		1300		
Middle Holocene	Early Period (Archaic) ↑	2,000		Stone bowls, triangular points, fishing gorges, burials
		3,000 4,000 5,000 6,000	 	Dart and atlatl, cogged stones, plummet stones, leaf-shaped points/knives, corner-notched and stemmed points, Coso Obsidian, burials
Early Holocene	↓	7,000	Pauma Complex Encinitas Tradition La Jolla Complex	
		8,000 9,000 10,000	 San Dieguito Tradition/Complex	Spear, crescents, lanceolate and leaf-shaped points, leaf shaped knives, Casa Diablo and Coso Obsidian, burials

Source: San Diego County DPLU, 2007; Gallegos, 2002

Table 2.5-2. Significant Historical Sites

Designation⁽¹⁾	Resource Name	CPA/Subregional Planning Area
HPL #2005-003	Julian Eltinge Residence	Alpine
HPL #2006-003	Alpine's Woman's Club	Alpine
HPL #2002-009	Vincent & Adele Whelan House	Bonita
HPL #2002-010	Russell C. & Ella B. Allen House	Bonita
HPL #2007-004	Glen Abbey Memorial Park	Bonita
HPL #2007-005	U.S. Grant House	Bonita
HPL #6	Bonsall School House	Bonsall
NRHP #70000145, NHL, CHL #940	Guajome Ranch House	Bonsall
CHL# 634	El Vado	Borrego Springs
CHL #635	Los Puertecitos	Borrego Springs
NRHP #73002252, CHL #858	Fages-De Anza Trail-Southern Emigrant Road	Borrego Springs
CHL #750	Peg Leg Smith Monument	Borrego Springs
CHL #673	San Gregorio	Borrego Springs
CHL #785	Santa Catarina	Borrego Springs
HPL #2003-005	Camp Lockett Historic District	Campo
CHL #411	Campo Stone Store	Campo
HPL #10	Descanso First Schoolhouse (including ruins and farm)	Descanso
HPL #11	Descanso Station Restaurant (including Wayside Stop)	Descanso
HPL #12	Descanso Town Hall	Descanso
HPL #2006-005	Descanso Rock cabin	Descanso
HPL #2007-001	Dulzura Café	Dulzura
HPL #16	Oddfellows Cemetery	Fallbrook
HPL #17	Ostrich Creek Bridge	Fallbrook
HPL #2003-004	Live Oak Park Tables & Objects	Fallbrook
HPL #2005-005	Lamb House	Fallbrook
NRHP #83003593	Table Mountain District	Jacumba
HPL #20	Mataguay Historic District	Jamul/Dulzura
HPL #21	Barn at the Oaks	Jamul/Dulzura
NRHP #78000747, HPL #5	Julian/Robinson Hotel	Julian
HPL #2005-001	Edwards Rock House	Julian
CHL #647	Butterfield Overland Mail Route	Julian
CHL #412	Julian	Julian
CHL #639	Palm Springs	Julian
CHL #793	San Felipe Valley and State Station	Julian
CHL #304	Vallecito Stage Depot	Julian
CHL #425	La Canada de los Coches Rancho	Lakeside
HPL #15	Lakeside Church	Lakeside
HPL #2005-002	Ferry Ranch House	Lakeside
CHL #482	Camp Wright	North Mountain
NRHP #66000222, NHL, CHL #502	Oak Grove Stage Station	North Mountain

Table 2.5-2 (Continued)

Designation⁽¹⁾	Resource Name	CPA/Subregional Planning Area
HPL #2005-006	Sickler Brothers Pala Mill	Pala/Pauma
CHL #243	Asistencia de San Antonia de Pala	Pala/Pauma
NRHP #68000021, NHL, CHL #616	Las Flores Asistencia	Pendleton/De Luz
NRHP #71000180, CHL #1026	Santa Margarita Ranch House	Pendleton/De Luz
NRHP #94001161, HPL #8	Ramona Town Hall	Ramona
NRHP #91000548, HPL #9	Verlaque Adobe	Ramona
HPL #22	Ramona Nuevo Memory Gardens Cemetery	Ramona
NRHP #78000749	Ramona Castle	Ramona
HPL #2002-004	John B. & Bessie Cushman House	San Dieguito
HPL #2002-005	Rancho Santa Fe Land Improvement Co. Spec House #1	San Dieguito
HPL #2002-006	Frank William Joers House	San Dieguito
HPL #2002-007	Frederick & Mary Allen/Boettiger House	San Dieguito
NRHP #91000943, HPL #2002-011	George A.C. Christianity Residence	San Dieguito
NRHP #91000944, HPL #2003-003	Charles A. Shaffer Residence	San Dieguito
HPL #2004-003	Tomlinson Residence	San Dieguito
HPL #2006-004	Youngblood/Cliff May House	San Dieguito
HPL #2006-006	Fleming/Rice RSF House	San Dieguito
HPL #2007-008	Casa Blanca	San Dieguito
HPL # 2008-001	Townley/Lilian Rice House	San Dieguito
NRHP #93001018	Baker, Pearl, Row House	San Dieguito
NRHP #93001520	C.W. Harris Site (NRHP #93001520)	San Dieguito
NRHP #91000945	Claude & Florence Terwilliger Residence	San Dieguito
NRHP #91000939	Clotfelter, Reginald M. and Constance, Row House	San Dieguito
NRHP #98001552	Ellis Bishop House Historic District	San Dieguito
NRHP #91000946	Lilian J. Rice Residence	San Dieguito
NRHP #91000941	Norman & Florence C. Carmichael Residence	San Dieguito
CHL #982	Historic Planned Community of Rancho Santa Fe	San Dieguito
NRHP #91000940	Rancho Santa Fe Land Improvement Offices	San Dieguito
NRHP #91000942	Samuel Bingham Residence	San Dieguito
CHL #369	Chapel of Santa Ysabel	North Mountain
HPL #2008-003	James Hubbell Residence, Santa Ysabel	North Mountain
NRHP #66000227, NHL, CHL #626, HPL #4	Bancroft Ranch House	Spring Valley
HPL #2002-002	McRae-Albright Ranch house	Spring Valley
NRHP #92001268	Kuchamaa	Mountain Empire
NRHP #91001748	US Inspection Station--Tecate	Mountain Empire
NRHP #66000228, NHL, CHL #311	Warner's Ranch	North Mountain

⁽¹⁾ NRHP = National Register of Historic Places, NHL = National Historic Landmark (not numbered),

CHL = California Historic Landmark, HPL = San Diego County Historic Property Listing

Sources: DPLU 2008i; NPS 2008b; OHP 2008

Table 2.5-3. Fossils in the Coastal Plain Region

Age	Location	Rock Unit/Type	Fossil Type
Late Jurassic (~140 my) ⁽¹⁾	Central portion	Sedimentary strata	Shells and molds of marine invertebrates
	Central portion	Santiago Peak Volcanics	Permineralized wood
Late Cretaceous (~75 my)	Northern portion	Sedimentary strata; Point Loma Formation	Marine invertebrates (i.e., clams, oysters, snails, ammonites, crabs), vertebrates (i.e., sharks, rays, bony fish), rarely dinosaurs that were transported into the ocean from land to the east (ankylosaur and hadrosaur)
Eocene (~40-48 my)	Camp Pendleton	Sedimentary strata	Marine and estuarine; terrestrial skulls, teeth, and bones; stem/leaf impressions
	Fairbanks Ranch, La Jolla Valley, 4S Ranch and Lakeside	Torrey Sandstone, Scripps Formation and Friars Formation	Shells and molds of marine, estuarine, and terrestrial invertebrates; skeletal remains (pond turtle, lizard, crocodile, snakes, mammals); leaf assemblages; permineralized wood
	Otay Mesa and Spring Valley	Mission Valley Formation and Sweetwater Formation	Shells and molds of marine invertebrates
	Bonita-Sweetwater and Spring Valley areas	Sweetwater Formation	Bones and teeth of terrestrial mammals
Oligocene (~25-35 my)	Proctor Valley and Bonita-Sweetwater	Sedimentary strata; Otay Formation	Terrestrial skeletal remains
Miocene (~5-7 my)	Camp Pendleton	San Mateo Formation	Skeletal remains (e.g., sharks, rays, bony fish, sea birds, fur seals, walrus, dolphin, porpoise)
Pliocene (~2-4 my)	Bonita- Sweetwater and Otay Mesa	Sedimentary Strata; San Diego Formation	Marine invertebrate and vertebrate (e.g., fish, sea birds, seal, walrus, river dolphin, porpoise, beluga whale, sperm whale, baleen whale, sea cow)
	Southern portion	San Diego Formation	Marine vertebrate skeletal remains
Pleistocene (~1 my)	Northern portion	Marine deposits	Shells of estuarine and marine invertebrates
		River terrace deposits	Skulls, teeth, and/or bones (e.g., frog, salamander, turtle, lizard, coot, duck, grebe, quail, hawk, ground sloth, capybara, squirrel horse, tapir, camel, bison, deer, mammoth, mastodon)
Late Pleistocene (200-300,000 y)	Bonita-Sweetwater area	Sedimentary Strata	Terrestrial vertebrate skulls, teeth, and/or bones (e.g., passenger pigeon, song birds, sloth, mouse rabbit, dire wolf, horse, camel, deer, mastodon, mammoth)

⁽¹⁾ million years

Source: DPLU 2007b; DPLU 2007i; DPLU 2009d

Table 2.5-4. Fossils in the Peninsular Ranges Region

Age	Location	Rock Unit/Type	Fossil Type
Miocene (~16 my)	Jacumba Valley	Table Mountain Gravels, Jacumba Volcanics	Terrestrial skeletal remains (e.g., pigs, camels, deer, cattle)
Pleistocene (~1 my – 10,000 y)	Warner Valley near Lake Henshaw	Pauba Formation and Temecula Arkose	Terrestrial fossils ⁽¹⁾ (e.g., shrew, kangaroo rat, gopher, wolf, badger, bobcat, horse, camel, pronghorn, deer, mammoth, et al.)
	Pala/Pauma	Pala Conglomerate	Single isolated horse tooth

⁽¹⁾ Although no fossils have been documented from the Warner Valley Pleistocene deposits, diverse assemblages are known from similar formations in Temecula Valley

Source: DPLU 2007b; DPLU 2007i; DPLU 2009d

Table 2.5-5. Fossils in the Salton Trough Region

Age	Location	Rock Unit/Type	Fossil Type
Miocene and Pliocene (~2-7 my)	Carrizo Badlands and Coyote Mountains	Sedimentary strata (Imperial Group)	Marine invertebrate fossils (e.g., branching brain corals, clams, oysters, scallopes, snails, crabs, barnacles, sea urchins, sand dollars, sea stars et al.), skeletal remains of marine vertebrates (sharks, rays, bony fish, walrus, dolphin, baleen whale, sea cow et al.)
Pliocene and Pleistocene (~5 my – 10,000 y)	Vallecito Badlands and Borrego Badlands	Sedimentary strata (Palm Spring Group)	Terrestrial vertebrates skulls, teeth, and/or bones (e.g., frog, tortoise, lizard, snake, condor, flamingo, ducks, owl, crow, shrew, mole, bat ground sloth, rabbit, wolf, coyote, fox, bear, raccoon, skunk, badger, jaguar, horse, tapir, camel, llama et al.)

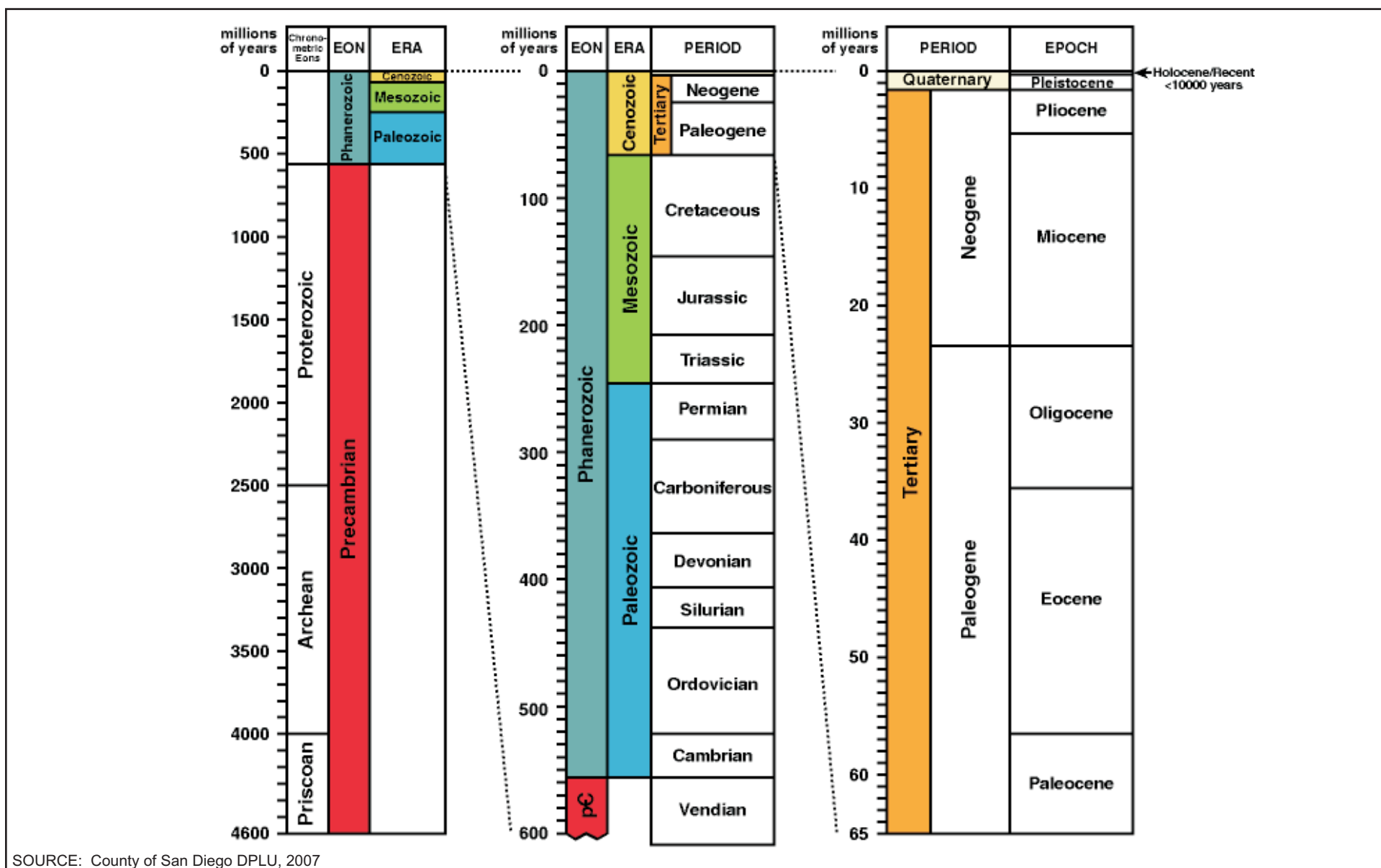
Source: DPLU 2007b; DPLU 2007i; DPLU 2009d

Table 2.5-6. Formations with a High or Moderate Potential to Contain Paleontological Resources in San Diego County

Coastal Plain Region	Salton Trough Region	Peninsular Ranges Region
Ardath Shale	Borrego Formation	Alluvial deposits of mountain valleys
Bay Point Formation	Brawley Formation	Older Quaternary alluvial fan deposits
Capistrano Formation	Canebrake Conglomerate	Pauba Formation
Delmar Formation	Imperial Group/Formation	Santiago Peak Volcanics ⁽¹⁾
Friars Formation	• Deguynos Formation	Table Mountain Gravels
Lusardi Formation	• Latrania Formation	Temecula Arkose
Lindavista/Mission Valley Formation	Later Quaternary alluvial fan deposits	
Monterey Formation	Ocotillo Conglomerate	
Otay Formation	Palm Spring Group/Formation	
Point Loma Formation	• Arroyo Diablo Formation	
San Diego Formation	• Canebrake Conglomerate	
San Mateo Formation	• Hueso Formation	
Santiago Peak Volcanics ⁽¹⁾	• Olla Formation	
Stadium Conglomerate	• Tapiado Claystone Formation	
Sweetwater Formation	Split Mountain Group/Formation	
Torrey Sandstone	• Alverson Volcanics	
San Onofre Breccia	• Elephant Trees Conglomerate	
Unnamed marine terrace deposits		
Unnamed river terrace deposits		

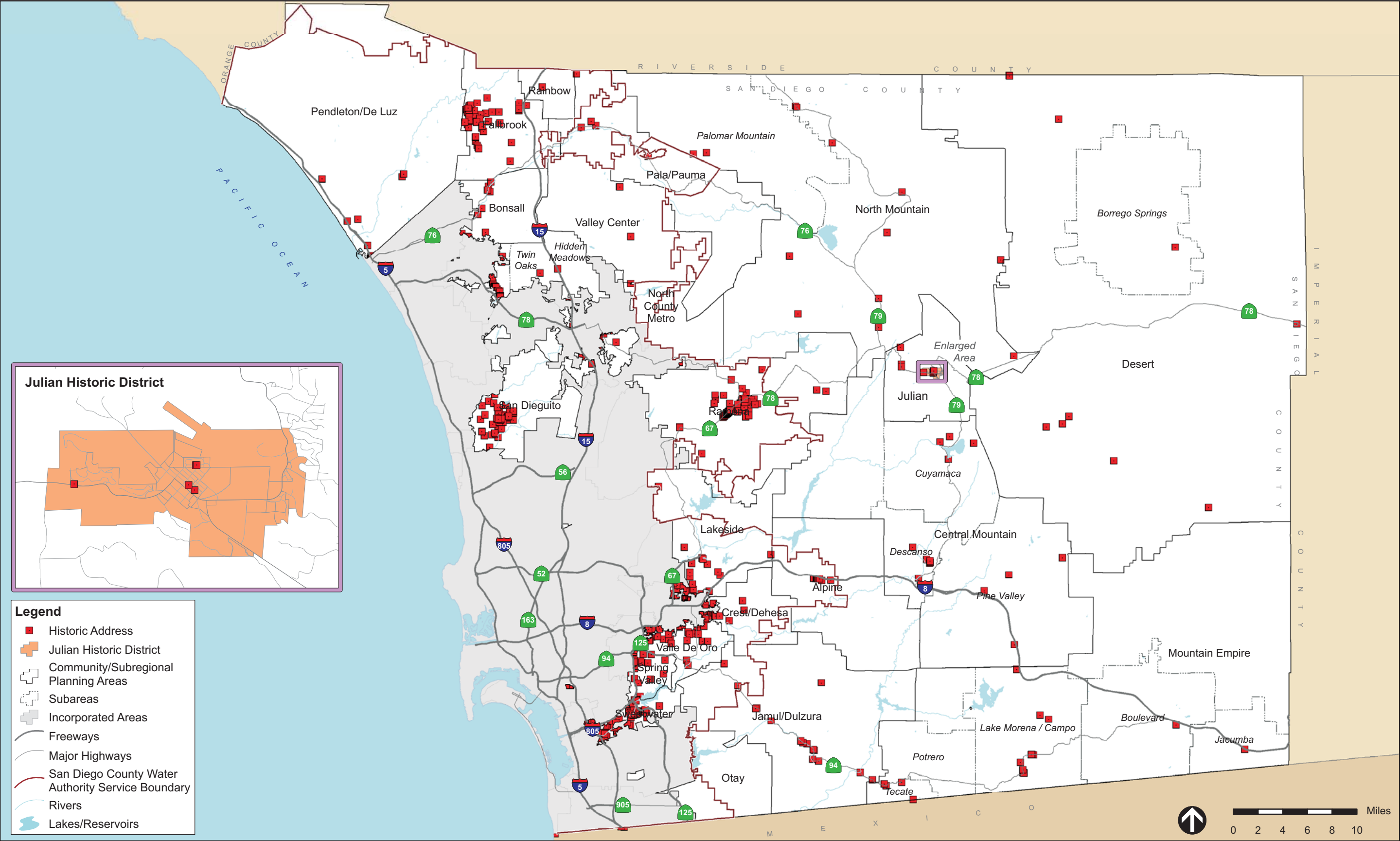
⁽¹⁾ Only the metasedimentary portion of the Santiago Peak Volcanics contains fossils. A qualified paleontologist may identify the Santiago Peak Volcanics formation on site as non-metasedimentary, which would result in no significant impact to paleontological resources, therefore, precluding the need for monitoring.

Source: County DPLU 2009d



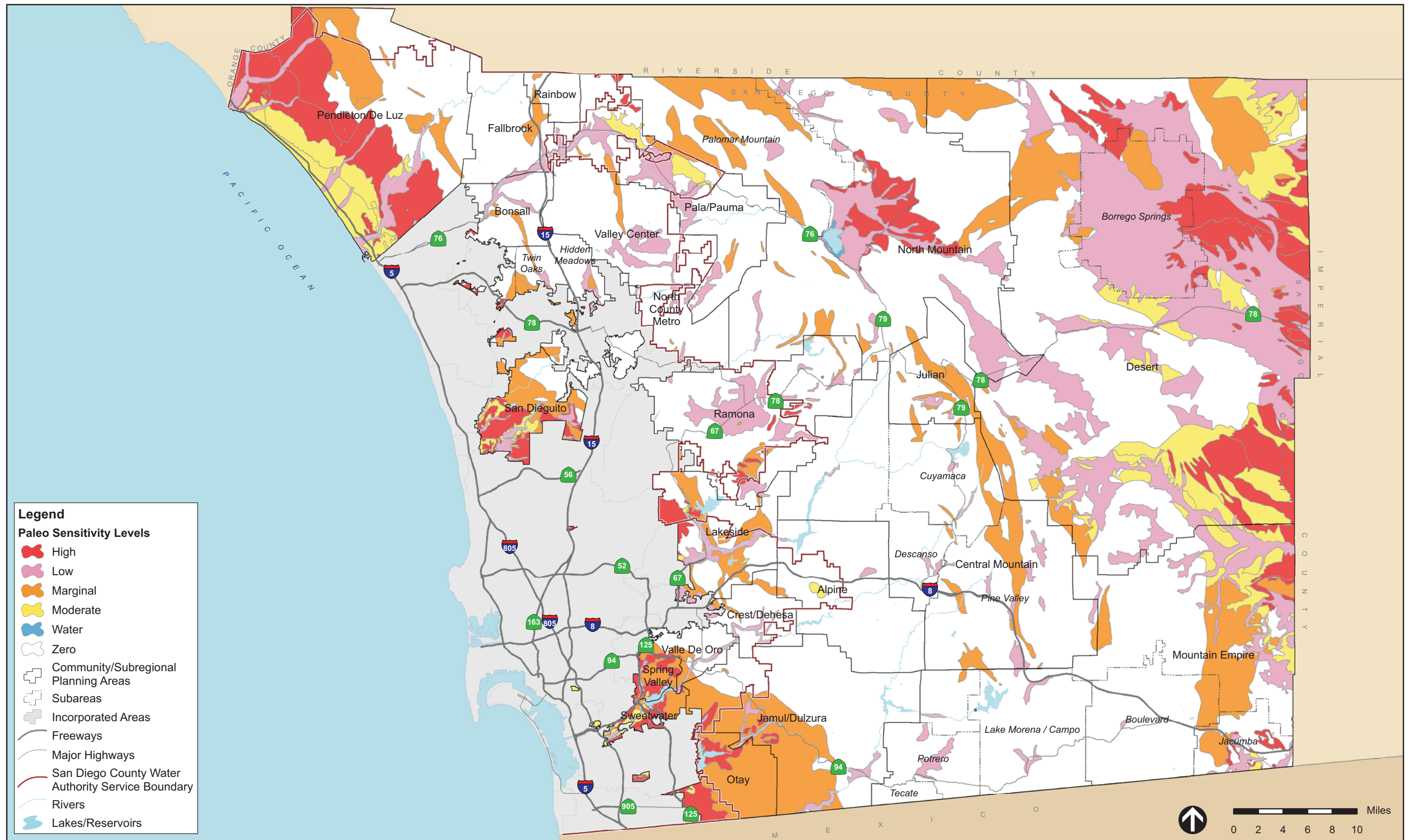
GEOLOGIC TIME SCALE

FIGURE 2.5-1



HISTORIC RESOURCES AND JULIAN HISTORIC DISTRICT

FIGURE 2.5-2



PALEONTOLOGICAL SENSITIVITY MAP

FIGURE 2.5-3